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ABSTRACT

This report has two sections: an account of the meeting on autodidaxy, or self-directed learning; and a collection of studies and papers on the subject. The first part considers the following: (1) the conceptual domain of autodidaxy; (2) the constitutive elements of autodidaxy, and the plurality of definitions attached to it; (3) aspects of autodidaxy applied to different learners; (4) autodidaxy and educational institutions; (5) the limits of audodidaxy; (6) the organization, methods, and media of the self-directed learning situation; and (7) evaluation and recognition of knowledge acquired through autodidaxy. These sections are followed by the conclusions and recommendations of the meeting. The studies deal with critical analysis of forms of autonomous learning, self evaluation, social validation of autodidaxy, and the self-education of teachers. These studies were done by P. Chaix and C. O'Neil, E. Heidt, V. Jankovic, and S. Petracek. The studies are followed by a paper on recommendations of technical consultants on the forms of autonomous and semi-autonomous learning of second languages. The report concludes with a provisional bibliography, a document giving the objectives of the meeting and the topics for consideration, and a list of participants. (AMH)

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EUROPEAN EXPERT MEETING ON THE FORMS OF AUTODIDACTIC LEARNING

Paris, 16-19 October, 1979

FINAL REPORT AND RECOMMENDATIONS

FL013 650

Division of Structures, Content, Methods and Techniques of Education

April 1980

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INTRODUCTION

The report of the European Meeting of Experts on Forms of Autonomous Learning is a team effort. In writing it, the authors have attempted to respect both the spontaneity of the debates and the enthusiasm of the participants. The Unesco Secretariat hopes that the reader will be just as enthusiastic as the participants in exploring in an original way all the different facets of autodidaxy and highlighting the main implications for education.

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PREFACE

EUROPEAN MEETING OF EXPERTS ON THE FORMS OF AUTODIDACTIC LEARNING

Paris, 16 - 19 October 1979

The European meeting of experts on forms of autodidactic learning held in Paris from 16 to 19 October 1979 was organised in accordance with a decision taken during the 20th session of Unesco's General Conference which foresaw that, within the framework of the Approved Programme and Budget for 1979-1980, European experts would examine "teaching methods which encourage an independant approach to learning", drawing upon the experience of previous work carried out on autonomous language learning.

As early as 1975 UNESCO had commissioned a team of researchers from the Centre Audio-Visuel of the Ecole Normale Supérieure de St. Cloud (France) to undertake, in collaboration with specialists from other European countries, a study on forms of autonomous learning applied to foreign languages. From 1975 to 1978, this work continued focussed on the working languages of UNESCO - English, Spanish, French and Russian. Organised by the UNESCO Secretariat, with the participation of experts from Spain, France, Netherlands, UK, Sweden and the USSR, this research produced conclusions which, after several meetings (held in Paris in 1977 and in Madrid in September 1978) were synthesized along with some proposals, in a report entitled "A Critical Analysis of forms of autonomous learning in the field of foreign language learning".

The October 1979 meeting was organised within this perspective. It was, therefore, a logical follow-up and development of previous work, whilst opening up a new phase of research, expanding the particular case of language learning to the general problems of autodidaxy.

Participants were invited to make detailed and concrete suggestions and proposals for further research to encourage and spread the practice of self-learning.

The opening speeches at the meeting, given in turn by Mr. Jean Thomas, Mr. Michel Debeauvas and Mr. Henri Dieuzeide recalled this thème. Mr. Jean Thomas, President of the French National Commission for UNESCO stressed the interest given to this research by the French National Commission which lead it to organise the meeting. Citing the type of autodidact of which Jean-Jacques Rousseau remains the most illustrious example, Mr. Thomas asked himself if everyone was not these days to some degree an autodidact: "either to master a foreign language, acquire new knowledge or new techniques, or even to learn - as the poet calls it - the beautiful and arduous task of becoming a person".

This widespread practice has its foundations in the first education received during youth, but beyond that is enriched by all events and experiences, more or less autonomous, more or less directed, which complete and deepen this education "whether impartially to adapt oneself to new conditions, or for vocational promotion" Such is the basis of lifelong education.

Noting the variety and the potential of the means available today in this field, Mr. Thomas wondered whether "instead of leaving these more or less autonomous forms of education to chance , personal initiatives or experiences, a pedagogy or pedagogies, as flexible and effective as possible, could not be built up from all these experiences and an analysis of the methods at hand. In sum, a "guided autonomy". Such a pedagogy conceived for adult learners could also perhaps be put into effect inside the school system itself, for children or for adolescents.

Mr. Michel Debeauvais, Director of the International Institute of Educational Planning remarked that, although this meeting did not fall directly within the range of the Institute's work and research, it did, nevertheless correspond to one of its concerns: that of taking more and more account of the "qualitative" aspects of education and the links between out-of-school "informal systems" and formal ones in the elaboration of educational policy, as well as in methods of planning.

The Institute was very pleased to see that the Agenda of the meeting approached problems of autodidaxy from a much more general point of view than the specific case of "autodidacts". The methods of self-learning should be studied and put into practice at all levels of education: an experiment being carried out at the Institute at present illustrates this: work in small autonomous groups necessitates the elaboration of didactic materials for self-learning which could also be used for continuous education of planners in the field.

Thus the conclusions of the meeting would certainly be of interest to the Institute, especially those which would contribute to showing which forms of organisation should be adopted to ensure self-learning procedures of the conditions most favourable to their development, as well as the best methods of linking educational systems with the "educogeneous" environment (H. Janne) and to modify conditions of work in order to promote the practice of self-learning.

Mr. Henri Dieuzeide, Director of the Division of Structures, Content, Methods and Techniques of Education in UNESCO stressed the importance attached by UNESCO to this research and to a meeting which would enable a departure from the specific, as in the case of language learning to the autodidaxy of adults in general. Pointing out the gaps or deficiencies existing in this field, particularly the weak links between deployment of efforts to develop autodidaxy and the school system, he hoped that the experts would contribute to the definition of structures, institutions and programmes to be developed to promote autodidaxy, as well as the place which should be reserved for it in school education.

Systematic international research should help overcome the obstacles so often encountered in this field: vagueness of concepts and confusion of terms, reticent attitudes of academics (the image of the autodidact in "La Nausée" by J.P. Sartre, as an "orphan of culture" have not disappeared), mistrust of the self-taught man whilst the self-made man is regarded with favour.

All this calls for serious examination of the methodologies and objectives in view, along the lines of lifelong education as proposed in "Learning to Be" where education is envisaged within the perspective of an Educational City and where barriers between school and out-of-school tend to become obliterated.

Autodidaxy proposes an answer to the needs of a category of adult learners who have had neither the possibility nor even sometimes the desire to take part in organised and structured education.

Particular attention should be given to those pedagogical approaches which enable the learner to master the learning process and to personally evaluate his progress.

Besides this, we must ask ourselves - both for technical, and ethical reasons, about the considerable development of the "industry of learning" and about the real worth of the products it places on the self-learning "market". Methods apt to evaluate these materials must be found if the adult learner is to be protected from commercial abuse and be assisted and guided in his choice.

Since 1975, UNESCO has encouraged the adaptation of certain types of facilities (school libraries, for example) towards the needs of autonomous learning. In liaison with non governmental organisations and qualified specialists, the Secretariat has tried to make progress in the evaluation of programmed instruction and computer-assisted instruction. The experiences of various Member States at the level of primary or university education have helped UNESCO to define the concepts and practice of self-management in education.

Finally, UNESCO has undertaken a series of studies on the acquisition of autonomous learning behaviour in children from the ages of 8 to 16, to try to analyse the global nature of pupil participation in the organisation and management of their studies, illustrating the role of behavioural expression and communication as the bases of autonomous learning behaviour and emphasising the importance of appropriate pedagogical methods and materials.

This expert meeting falls, therefore, within a larger framework and should contribute to the synthesis of on-going experiments.

OFFICERS OF THE MEETING: The following Officers were elected:

President: Mr. Victor Marbeau (France)
Inspecteur général de l'Education

Vice Presidents:

Mr. Svatopluk PETRACEK (Czechoslovakia)
Director of the European Information Centre
of the Charles University (Prague)

Mr. Allen TOUGH (Canada)
Associate Professor (Adult Education)

Rapporteur:

Mr. Vojislav JANKOVIC (Yugoslavia)
Professor of educational sociology at
Belgrade University.

Two commissions were set up, one to deal with sociological aspects of autodidaxy, and the other with the psycho-pedagogical ones.

Besides these commissions, six working groups shared in the task of discussing the following points:

1. Definition of concepts
2. Fields of research and an inventory of existing experiences
3. Relationship between school and out-of-school
4. Hypotheses for a typology
5. Minimal conditions for autodidactic learning
6. Autodidaxy and development of the human being

Visits and receptions:

Mr. Jean AUBA, Director of the International Centre of Pedagogical Studies welcomed the participants to Sevres where a visit of the auto-documentation centre of the Experimental College was organised.

This was followed by a reception in the Centre's library.

Participants were shown around the public information library of the Georges Pompidou Centre, by its Director, Mr. René Fillet, and were able to see how this original unit works.

The cordial welcome reserved for the participants by the Cultural Centre of the French Community in Belgium and by Mr. Francis de Lulle its director must also be mentioned.

PART I

THE CONCEPTUAL DOMAINE OF AUTODIDAXY

Autodidaxy, or at least the existence of some parallel form of learning for specific learners called autodidacts, is an ancient phenomenon which everyone thinks they know all about. But, whilst during the last decades educational systems have undergone profound changes which have been the object of impassioned, even controversial, discussions, autodidaxy, although these days developing considerably in new ways, remains very much more mysterious. Above all, it is perceived through prejudices pre-suppositions and stereotyped ideas which have varied but slightly over the years.

This was felt by all the participants in the meeting from the outset as was the need to attempt a better definition - with all its conflicting aspects - of the area covered by the concept of autodidaxy.

1.1. Need for clarification

The concept of autodidaxy is not self-explanatory. In effect, as stressed by the Chairman of the meeting, the term is a "minefield". On the one hand, the semantic field covered seems larger than that made up of "learning" and autodidact". On the other, differences of interpretation in its meaning add still more to the confusion. For example, to take up three perspectives envisaged during the debates, the word varies considerably in its meaning

- according to language, particularly for French and English (if connected expressions are taken into account)
- according to its historical reference (antiquity, 19th century, the first half of the 20th century, today)
- according to its extension: from very limited to very wide. There was even talk in this respect of a blanket term.

Besides the incidental proposals suggested by the participants, two attempts at a formal and operative definition were submitted to the experts on the first day. They were rather strongly criticised because of their restrictive nature. However, if they didn't make for a basis for agreement, they did, by means of the comments they inspired, contribute to delineating certain important aspects.

The first was that which had guided the group of linguists in its critical study of the forms of autonomous learning (autodidaxy and semi-autonomy) in the field of foreign language learning (1) "AUTODIDAXY : learning in total autonomy, without institutional framework"; autonomous learning defined as learning without a teacher and autodidaxy were therefore presented in opposition in some ways to semi-autonomy, that is to say learning in partial autonomy.

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(1) cf. appendix: Report by P. Chaix: Presentation of Unesco research: "A critical study of forms of autonomous learning (autodidaxy and semi-autonomy) in the field of foreign language learning.

To be fair, it must be pointed out that the study in question was limited to learning materials and did not take into account, or only indirectly, the learners themselves. Although valid for the case of this specific research, the definition could not therefore be extended as it stood to learning situations and behaviour of learners; this was clearly stated.

The second definition was taken from the UNESCO Glossary of terminology on adult education. Here the problem was complicated by the fact that the two versions, English and French, were not exactly the same.

"INDEPENDENT LEARNING: learning carried out by an individual usually, but not always, self-initiated and with a minimum or a complete absence of guidance or assistance by another person or agency = F. autodidaxie" (1)

"AUTODIDAXIE: apprentissage accompli par l'individu sans qu'il soit aidé par une autre personne ou par une institution = E. independent learning"(2)

The question of initiative and monitoring (or absence of monitoring) of learning was thus posed, but not solved so far as the specific characteristics of autodidaxy were concerned.

Faced with these uncertainties, the participants were divided in their opinions. Some thought that the most effective working method would be to first agree on the terms and attempt a unanimously acceptable definition of autodidaxy in order to discuss the various implications. The others thought this an impossible, even useless task, because of the difficulties previously mentioned and proposed to progress in the discussion without previous agreement, confronting the specific conceptions with precise aspects. This opposition manifested itself as of the opening session and several times later in the meeting. It was even repeatedly requested that this problem be solved by vote.

A compromise was finally found. It was decided that the Agenda - which did not foresee the elaboration of any formal definition - would be followed but that a special group would be set up (amongst the six ad hoc working groups) to go into this subject in depth. This group gave an exposé of their reflexion on the topic during the plenary session on 19 October; this is integrated into the present report, along with the analyses made during the plenary sessions and the work of the five other groups and the two commissions.

In simplifying somewhat, it can be said that the concept of autodidaxy and the area covered by it, as it appeared during the meeting, is characterised by the relative balance between the weight of a certain number of usual definitions and common meanings (themselves sometimes contradictory) and that of elements referring to more recent procedures and situations, most often derived from the general concepts of learning.

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(1) - English glossary P. 49

(2) - Glossaire français P. 123

An examination needs therefore to be made of these two components : the first will be studied in this section, and the second in the following.

1.2. Usual definitions and common meanings (autodidact and autodidaxy)

1.2.1. Usual definitions in dictionaries and encyclopaedias

a) the definitions examined here, without presuming to be exhaustive, are those given in a certain number of English or French publications. This exclusivity is explained by the fact that:

- the working languages of the meeting were English and French;
- the participants - who referred implicitly or explicitly to these sources - came for the most part from the European region (in the sense of UNESCO'S definition) where these English or French definitions (or their equivalents in other European languages) are relatively well-known and give a common conceptual background, even if it is agreed that they are insufficient or outmoded.

b) the lexical entries considered were:

for English

AUTODIDACTIC (adjective)

AUTODIDACT (noun)

AUTODIDAXY

for French

AUTODIDACTE (adjective) and AUTODIDACTIQUE

AUTODIDACTE (noun)

AUTODIDAXIE

e) French definitions

- AUTODIDACTE (adjective) and AUTODIDACTIQUE

1) Curiously enough, the word seems at one time to have had specific usage in philosophical vocabulary. This was, of course, not retained during the meeting but it does certainly bring up the question of the relationship of autodidaxy with the limits of formal learning.

For example: Notions autodidactes (1) ou
notions autodidactiques (2)
= what is learned without a teacher, what is innate, the knowledge of moral good is self-taught.
= (qui apprend sans maitre, qui est inné, la connaissance du bien moral est autodidacte.)

2) Most often, however, meaning is more simply that expressed in one modern dictionary

"relatif à l'autodidacte, à ses connaissances (3)"
(related to the autodidact, to his knowledge)

Here, AUTODIDAGMATIQUE (4) is also used.

- AUTODIDACTE (noun)

All, or nearly all the definitions fall back on Greek etymology. (AUTODIDAKTOS, or more precisely, AUTOS and DIDASKEIN).

Here are a few examples:

- Someone who derives his knowledge from within himself (5)
  (Personne qui tient sa science d'elle-même)
- Said of one who has instructed and educated himself (6)
  (Se dit de celui qui est instruit et formé soi-même)
- He who learns without a teacher (7)
  (Celui qui apprend sans maitre)

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(1) Grand Dictionnaire Universel du XIXème siècle (1886) Tome 1 p. 982
(2) Nouveau Larousse Illustré (1927) Tome 1 p. 598
(3) Supplément au Dictionnaire alphabétique et analogique de la langue française (Paul Robert) (1970) p.48
(4) Cf. Grand dictionnaire universel du XIXe siècle op. cit. P. 982
(5) Dictionnaire général de la langue française (Hatzfeld, Darmesteter, Thomas) (1871) p. 167
(6) La Grande Encyclopédie (1885-1892) Tome 4 p. 758
(7) Dictionnaire de la langue française, LITTRE (1876) Tome 1 p. 250

- Said of one who has learned all he knows on his own (8)
  (Se dit de celui qui a appris seul tout ce qu'il sait)
- Said of a person who has taught himself (9)
- without a teacher(s) (10) without the help of a teacher (11)
  (Se dit d'une personne qui s'est instruite elle-même (9) sans professeur(s) (10), sans l'aide de professeur (11)
- said of one who, without outside assistance has learned alone all he knows (12)
  (Se dit de celui qui, sans secours étranger, a appris seul tout ce qu'il sait (12)
- who has taught himself without a teacher (13)
  (Qui s'est instruit lui-même, sans maître (13)

AUTODIDAXIE (AUTODIDAXY)

The word is much less frequently used and, for example, the French dictionary LITTRE (1876) points out that the term is not to be found in the dictionary of the Academie Française (neither is "autodidact"). However it is mentioned at least five times.

- action of learning without a teacher (14)
  (action d'apprendre sans maître) (14)
- action, talent, to learn without a teacher (15) (16) (hopefully) the ideal and goal of education (17)
  (action, talent, d'apprendre sans maître (15) (16) (si l'on pouvait dire ainsi) l'idéal et le but de l'éducation (17)
- systematic education of the adult by himself by using various technical apparatus of knowledge (18)
  (éducation systématique de l'adulte par lui-même à l'aide des différents instruments matériels de la connaissance (18)

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(8) - Nouveau Larousse illustré, op.cit. p.598
(9) - Lexis - Dictionnaire de la langue française, (LAROUSSE) 1975 p.131
(10) - Grand Larousse encyclopédique (1960) Tome 1 p. 748 et Petit Larousse (par ex. 1965) p.84
(11) - Grand Larousse de la langue française (1971) Tome 1 p. 322
(12) - Grand dictionnaire universel du XIXe siècle op.cit. p.982
(13) - Dictionnaire alphabétique et analogique de la langue française (1957) Tome 1 p.340 et Petit Robert (1978) p. 134
(14) - Dictionnaire de la langue française LITTRE, op.cit. p.250
(15) - Grand dictionnaire universel du XIXe siècle op. Cit. P.982
(16) - Nouveau Larousse Illustré op.cit. p.598
(17) - La Grande Encyclopédie op. cit. p. 758
(18) - Encyclopedia Universalis (1968) vol.5. p. 974

d) English definitions

- AUTODIDACTIC (adjective)

- "self-taught, acquired by teaching oneself, pertaining to self-teaching" (1)

- "of or relating to an autodidact - having the characteristics of an autodidact" (2)

- AUTODIDACT (noun)

- "one who is self-taught" (3) (4)

- "a self-taught person" (5)

- AUTODIDAXY = never appears, specialised anglo-saxon literature prefers "self-directed learning" or "self-instruction" etc.

As can be seen, in French as in English, all these attempts at elucidation are in fact hardly precise and refer one back to very different realities.

1.2.2. common meanings

These stem from the preceeding definitions, but often coloured with a positive or negative affective load.

a) first of all, it is agreed to recognise that "autodidact" is very old and that there is, at least in Europe a long tradition of autodidaxy. In fact, the first use of the term seems to go back to the 16th century (1534 for the English, 1580 for the French).

b) the direct reliance on Greek etymology which was often cited during the meeting. However this alone does not suffice to throw light on the whole problem. If AUTOS means "him, himself" and DIDASKEIN "teach", how is this "self-teaching" carried out?

c) A first answer to this which is found everywhere stresses the responsibility of the learner in assuming his own learning; to a certain extent this constitutes an intrinsic definition, without referring to an educational relation. The common denominator of all the definitions of autodidact is the same in both French and English

"qui s'est instruit lui-même"
"who is self-taught"

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(1) - A supplement to The New English Dictionary (Oxford) (1972), Vol.1 p.157
(2) - Webster's third New International Dictionary (1971), Vol.1, p.147
(3) - The New English Dictionary (1888) vol.1, p.574
(4) - Webster's dictionary, op. cit. p. 147
(5) - Chambers Twentieth Century Dictionary (1972), p.86

d) Another designation often crops up either explicitly or implicitly, that of

"without master, without teacher" (cf. previously cited definitions).

It is here that confusion occurs. For many, "without teacher" means without the physical or institutional presence of one or several teachers. For others, it means outside the field of direct pedagogical intervention of a teacher - which is not the same thing. For some this absence of a "teacher" is eminently regrettable, supposing that the "teacher" is good; for others, it is a factor of individual development and in any case the action of the teacher, whatever it may be, is always limited; he can teach, in the best of cases help the learner, he cannot learn for the pupil.

These various ambiguities, felt by many of the participants, are sometimes reflected in certain definitions of autodidaxy proposed by more or less contradictory statements in a same paragraph. The following extract can be cited as an illustration:

"the pupil must understand" ..."and he only really knows once he has understood. To understand is to digest the doctrine of the teacher, make it one's own by one's own willpower, which is already in a way to be an autodidact. But, one has to go further and say that the pupil must find out and discover for himself as much as possible..." "the ideal of the teacher should be to teach the pupil to get by without him" (1)

e) To simplify this, a diagrammatic presentation would show two opposing trends which judge rather more than they explain the case of the autodidact. In one way or another (historical, social, psychological) these trends were, of course, mentioned several times during the debate as being part and parcel - whether we like it or not - of a common fund of reference.

1. The first trend valorizes autodidaxy as a mental activity of the highest order, extols its enriching aspect for the learner, and, at the same time, its innovating character for the advancement of human knowledge. Here one would willingly cite Plato (Meno), Montaigne (Les essais), Rousseau (L'Emile) the great autodidacts "sons of their work" (2). In consequence there is a certain insistence on the fact (stressed by some participants) that autodidaxy has sometimes historically been regarded as a sort of aristocratic luxury, reserved for an elite. In this day and age of "ready to wear", the "made to measure" is no longer within reach of everybody, but remains of superior quality.

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(1) - La Grande Encyclopédie, op. cit. p. 758
(2) - ex. dictionnaires ROBERT, op. cit. (1957) p. 340, (1978) p. 134

2. The other trend emphasizes certain aspects often linked in the past to autodidaxy (badly acquired knowledge, lack of coordination of knowledge, pedantry . .) and which has for a long time made it a socially marginal phenomenon. "The notion of self-help scholarship lends itself to vulgarity and over enthusiasm particularly when media is promised for little effort" (1). Participants alluded for example to the characters of Bouvard and Pecuchet in the novel by G. Flaubert or to that of the self-taught-man in "La Nausée" by J.P. Sartre and to certain implications of the dictionaries. The meeting was reminded of certain designations of the autodidact as a "vulgar person, excessively enthusiastic" and G. Duhamel's statement was cited :

> "I'm not one of those people who speak of the autodidact with mistrust and derision" (2)

Whilst deploring this "bad reputation" some participants confirmed its existence: the following opinions expressed during plenary sessions or working groups bear witness to this:

- "Why, when being a self-made-man is something to be proud of, is it shameful to be a self-taught man"?

- "As Georges Gusdorf said so well, the autodidact is the orphan of culture"

or even

- "Autodidaxy if not supported and encouraged by society leads to weak and ephemeral knowledge"

These two trends have always co-existed, at least in Europe. But, over the last few years, and this international expert meeting proves it, there has been some restoration of the value of autodidaxy, but on bases other than those which traditionally characterise the first. As one expert rather bluntly put it "Today the accused is much more the academic than the self-taught man".

Agreement has still, however, to be reached on what autodidaxy really means today.

Before attempting this, it would perhaps be useful to look more closely at the relationships existing between autodidaxy and certain other notions, in particular, autonomy.

1.3. Autodidaxy and autonomy

There was frequent confusion between the terms "autodidactic learning" and "autonomous learning" in both working languages, autonomous learning often being used for autodidaxy.

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(1) - Encyclopaedia Britannica - Adult Education I.p.174
(2) - Grand Larousse Encyclopédique, op. cit. p.748

Debates resulted in a slightly better definition of these two notions and to their being given back, so to say, their respective autonomy.

The meaning of autonomy goes far beyond the sector of education. One speaks of autonomy of territories or provinces or of a motor vehicle . . . autonomy appears to designate some degree of freedom in relation to a surrounding system. It is a way of being and not an act, an active process.

Autonomy in the sense of the degree of freedom within an environment can thus be more or less large. Total autonomy becomes properly speaking independance. The same individual faced with different external systems will have a different autonomy.

Autonomy alone cannot designate a mode of learning, but does permit identification of one aspect of the situation in which the learner finds himself when faced with the educational system in which he is participating.

One can speak of autonomous learning for a child, adolescent or even an adult integrated into a school institution in the same way as for an autodidactic learner.

An educational institution can even encourage a "certain" autonomy, permit the exercise of free choice in learning. Certain modern pedagogical methods consider the increase of autonomy in learners a primordial objective.

At first sight, autodidaxy seems to identify itself with maximum autonomy. However a closer look is needed. Is Sartre's autodidact going through the alphabet to accumulate all the culture contained in the library autonomous?

At various times, the participants stressed that total autonomy, even within the framework of autodidactic learning, could only be an ideal. For, however independant and isolated he may be, the learner can have access only to prearranged areas of knowledge; in no way can he learn all he wants to know from studying the world around him.

If we retain the idea of various degrees of autonomy and that they are to be defined in relation to the environment, then the autonomy of the learner, whether inside or outside an educational institution, can be analysed in relation to the different elements of the system.

The level of freedom has to be examined in relation to:

- the setting of objectives

- the duration and pacing of learning

- -pedagogical methods

- learning aids and media

- evaluation of achievements

the autonomy of the learner varying in relation to each of these elements.

Many participants insisted that autonomy could be learned, that to successfully terminate his project an autodidact should have already learned autonomy and that one of the demands with respect to educational institutions, which would involve all development of autodidaxy, would be that they teach autonomy. Please refer to part 3 in this respect.

1.4. Connected expressions

a) During the meeting, participants used a certain number of expressions in direct liaison with the notion of autodidaxy. The following list takes the main ones into account, (in French and English). As with "autodidaxy" many of these words or expressions have a very diversified meaning, often badly defined in specialised literature. Moreover, during the meeting various deviations in meaning of these words were apparent. A refined conceptual analysis which would delineate the sematic field of each expression and propose definitions could be useful. This has not so far been attempted, but would certainly be interesting.

b) English expressions

- FURTHER EDUCATION
- INDEPENDENT LEARNING
- INDIVIDUALIZED LEARNING
- LIFELONG EDUCATION
- SELF-DIRECTED LEARNING
- SELF-EDUCATION, SELF EVALUATION, SELF ASSESSMENT
- SELF-FULFILMENT
- SELF-INSTRUCTION
- SELF-MANAGED (= SELF-PLANNED) LEARNING
- SELF-TUTORING

c) French expressions

- APPRENTISSAGE INDIVIDUALISE
- AUTO-APPRENTISSAGE
- AUTO-EDUCATION
- AUTO-ENSEIGNEMENT
- AUTO-FORMATION AUTO EVALUATION
- AUTO-REALISATION
- EDUCATION PERMANENTE
- FORMATION CONTINUE
- FORMATION CONTINUEE
- TRAVAIL INDEPENDANT (= TRAVAIL AUTONOME)

Specialists remarked that in all the expressions with SELF, SELF was equivalent only to a part (the second) of the meaning of AUTO which implies:

1) independence, freedom of action

2) process carried out with one's own resources, without outside authority.

Comparative terminology would render a great service to everyone.

PART II

CONSTITUTIVE ELEMENTS AND CONCEPTION OF AUTODIDAXY

First of all, it should be remembered that autodidaxy, as considered during the meeting, concerns adults; however the possibility of preparing a younger audience for this type of learning within the school system itself was also brought up several times.

The extreme difficulty of identifying a target public was also mentioned, the autodidact often being somewhat elusive in his behaviour. There was ever a comparison between what was called "the lonesome learner" travelling across the fields of knowledge, and "the lonesome cowboy" in his conquest of the West. The implicit representations which each participant had of the autodidact or types of autodidact was not, of course, without influence on the different concepts proposed.

The participants, encouraged by the Unesco representatives dropped the idea of one definition and tried to describe the different facets of autodidaxy, to highlight its distinctive traits and to draw up a "map of the semantic field" by making "a contrasted typological inventory" of theories.

2.1. Constitutive components

It would seem on looking through the interventions that these elements are of a very diverse nature. The main ones can however be divided into four groups:

Autodidaxy supposes:

a) a specific relation to knowledge;

b) specific modalities in the learning process;

c) frequently, lack of classical institutional support with simultaneously, assistance of a different kind;

c) characteristics relative to and depending upon definite situations.

a) A specific relation to knowledge

This relationship is distinguished, amongst others by

- An active appropriation of knowledge: more than in the traditional acquisition of knowledge and know-how by learners, autodidactic learning always implies a fundamental active participation of those involved. In addition, the process is often innovative, "inventive" or at odds with the environment. At the extreme, in some specific cases, the revolutionary aspects of this type of learning were mentioned. Whatever, the desire of accomplishment always exists; "self-fulfillment" according to some, which concurs with life, professional, social or existential experience. The title of a book cited in one working group "Expand your Life" is significant here.

However, abusive generalisations must be avoided. This important factor cannot account, on its own, for the whole concept. As someone said, it hardly seems possible to speak for example of "sexual autodidaxy".

- The voluntary aspect of learning which is not imposed by a system (school, army etc): to take up certain expressions there would be "willingness to know", "desire of the individual", "voluntary and conscious learning". This is connected with the question of motivation which will be dealt with later, and that of "compulsory choice" which is imposed in certain cases. It can, of course, be argued that it is always possible to refuse this compulsory choice, at the risk, naturally, of being penalised in one way or another.

- The learner's"project": this "project" which presumably includes goals (even vague ones) and often a certain choice of resources was defined quite differently: "individual educational project" "learning project" "learning effort" etc. It can be envisaged, as will be seen, within either a large or very limited framework.

- An ideal pre-requisite: that of having learned to learn: "ideal" because in fact many autodidacts do not have this "quality". The majority of participants however, stressed its importance (know how to "organise one's thoughts", "have the power of concentration", possess the "necessary mental structure", know how to "organise resources", be capable of "transdisciplinary mental training" etc.

As a rule this ability, characteristic of "true" autodidaxy, is not innate. It is acquired either by experience, if need be at great cost, or some special training. This "preliminary preparation" (also called "learning to learn") could for example take place in school; or elsewhere. For adults at least, there should be the benefit of adequate institutional or social assistance.

b) Specific modalities in monitoring the learning process

- Self-management: for anglo-saxons, for example this often serves as a term of reference for characterising autodidaxy ("self-directed" or "self-managed" learning). This implies, at least when "self-direction" is absolute, control of planning and management of one's own learning, of decisions to be taken about aims, materials, methods and evaluation. There is in this case truly an "assuming of responsibility" by the learner for his own learning. However, to be able to do this, he must have the material possibilities, the capacity and the will to do it. This is linked to the wider problem of the relationship between autodidaxy and autonomy.

- **Responsibility**: this is a corollary of freedom of manoeuvre, the so-called "solo-piloting". For many, this sense of responsibility - a very human quality - can be encouraged, developed and extended and society should contribute to its development in different ways. When this sense of responsibility is lacking, it would result in a kind of "wildcat" autodidaxy (although this epithet is reserved by others for the case of autodidacts who learn without having learned to learn, or who do not benefit from pedagogical assistance of any sort; links often exist however between these three aspects).

c) Absence of traditional institutional support and provision of specific support.

- Absence of any institutional support: this is a well-known point which has inspired most of the previously examined traditional definitions of autodidaxy (cf. learning "without a teacher", without "assistance" without "outside help"). The experts agreed that this was hardly desirable, but that it had been so in the past and is a frequent reality today, despite efforts made to counteract it. In this respect, some distinction should be made between absence of support and geographical isolation. Learning which begins in geographical isolation could eventually become solidly framed. This is the case(1) of correspondence Courses, or distance education by radio and TV etc.

- Specific types of support: is provided from various "sources" which are more or less organised and which are, in one way or another at the learners' disposal. For example:

  - media (even if these are "full of traps" or "falsified" in some way by the "authority" running them;
  - libraries, documentation centres, resource banks, mediatheques etc.
  - environment (including the street and public places) the non-formal and non-institutional context. Specific problems raised by access to these resources and organisation of these methods are crucial and will be examined later.

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(1) Some of these teaching experiences, involving a varying degree of autodidaxy were described in detail during the meeting. Most of them dealt with foreign language teaching, using radio and television (i.e. Federal Republic of Germany, Denmark, Finland), computers (i.e. Quebec, USA), or other methods (i.e. Canada, France, Czechoslovakia, Turkey, Yougoslavia)

d) Relative character of autodidaxy and its link with specific situations

- The relative aspect: fundamentally, there would be no absolute autodidaxy. A person could be an autodidact for certain aspects, for a certain time, but only partially. This fluctuation in autodidactic learning (and for certain experts, learning of this type always crops up for each individual at some time or other) would correspond to the phases and rhythms of life. This would be different from scholastic learning which is of course, limited from the point of view of time, but which is imposed on the learner as a global and extremely compulsory system (whatever its value or effectiveness).

- Precise situations: it has been stated that autodidaxy cannot be discussed without looking into its context. At the extreme, it could be said that there are almost as many types of autodidactic learning as types of situation and it is in this sense that the beginning of a typology presented later on is interesting. A participant evoked his own personal experience saying that learning a language alone at home with a book is totally different to learning during military operations, a gun in one's hand. Autodidaxy needs no specific place, even if some are more appropriate than others, nor a time (one can be an autodidact at any age) but is always dependant upon local conditions and specific factors of space and time.

2.2. Some particular conceptions

As has been seen, and with the present state of the art, a common definition taking into account all the given data is impossible. A unique conception is, at the moment, hardly likely due to a priori ideas and the social systems of different countries. This unity is not perhaps after all desirable; what is valid for one group of autodidacts in a given socio-political context is not valid for another.

This being said, the ideas advanced seem to be based

a) either on the privileged, primordial, dominant character of a constitutive element in relation to all the others which are more or less accepted, but considered of secondary importance;

b) or on the exclusive choice of an element directly in binary opposition with another, the other aspects thus not being envisaged.

a) conceptions based on a privileged constitutive element.

During the meeting, the four main ones seem to have been:

- autodidaxy as non-institutionalised learning i.e. without institutional organisation;

- autodidaxy as isolated, individual, solitary learning;

- autodidaxy as self-managed learning

- autodidaxy as a privileged means of fulfilment and development of the human being.

b) conceptions by opposition.

In this radically contrasting perspective, the defenders of one or the other conception have based their opinions either on arguments which are supposedly factual (analyses of situations, statistics) or on personal conviction, or in some cases on bath. For the sake of clarity, these theories can be presented in two columns:

AUTODIDAXY BY CHOICE	versus	COMPULSORY AUTODIDAXY
Generally speaking, modern society offers possibilities other than autodidaxy. The choice factor is thus determinant, whether motivations are positive or negative		- In many cases there is no other choice (ex. developing countries in Africa or South East Asia; - Even for industrialised countries, it can be considered that the "school is shipwrecked" an opinion contested by many; or that at least autodidaxy is and will be necessary because of the fantastic increase of knowledge and the fact that the rest of life is longer than that spent in school. "We are thus condemned to learn and to learn by ourselves on penalty of being a reject"

PURE AUTODIDAXY	versus	ASSISTED AUTODIDAXY
The autodidact is alone, without organised help. But, he is free to conduct his learning project as he wishes and knows how to find the elements he needs in his own environment		The existence of pure autodidaxy is hypothetical. In any case, things must not be left to chance in the hope that everything will go according to plan. As autodidaxy exists, it must be organised by providing aid, assistance and means

INDIVIDUAL AUTODIDAXY - This is "high-class", the "aristocratic privilege" but accessible to everyone and which must be preserved to safeguard its individual originality. - It is also a given fact in many countries; thus, one must act in consequence	versus	COLLECTIVE AUTODIDAXY It is possible to move from autodidaxy to a certain "heterodidaxy" which is not group learning, but a grouping of learners (ex: groups listening to the radio). The "associative" phenomenon and peer tutoring has to be called upon. In addition, culture being an exchange one must insist that the learner is not alone.
MINORITY AUTODIDAXY Concerning only a few individuals "the fringe of the population" autodidaxy is marginal because it is a "luxury" little encouraged by institutions	versus	MASS AUTODIDAXY This is already a fact here and there. Tomorrow, it could be "a means of mass education" perhaps also encouraged by a certain "inertia" of responsible institutions. Is autodidaxy thus destined to replace the school?
AUTODIDAXY LIMITED TO CERTAIN SUBJECTS Autodidaxy applies to only a limited field of knowledge. The encyclopaedic approach is no longer possible today. Moreover, certain aspects of knowledge, and certain subjects would, due to their very nature, be excluded from autodidactic learning. In compensation there would perhaps be "privileged subjects" "reserved" for autodidaxy.	versus	UNIVERSAL AUTODIDAXY Its field is so general that the only limit is man's knowledge. Autodidaxy is the way of attaining "self-fulfilment of the person"

To conclude, it should be noted that a certain vertical regrouping of the above positions is not excluded, far from it, the various aspects of these conceptions are quite evidently linked.

Without going to extremes, a similar grouping was suggested by certain participants who advocated two diametrically opposed "profiles"

- that of a chosen, pure, individual, minority autodidaxy, limited in range
- that of a compulsory, assisted, collective, majority autodidaxy, universal in range.

Thus, the total impossibility of reaching unanimous agreement on a short definition of autodidaxy is shown.

PART III

FROM AUTODIDACT TO AUTODIDAXY

The preceeding sections have clarified the different meanings given to autodidaxy and closely related terms. However, not all the definitions given were discussed during the meeting. This section will endeavour to explain certain aspects highlighted by the participants.

3.1. The images used to represent the autodidact

These images can be organised around two connotative poles: one assigns the autodidact to the marginality of "excluded" individuals deprived of clear socio-cultural status in terms of recognised value: the other to that of the culturally privileged with access to knowledge. The two typical images are therefore those of the "orphan of culture" and the "aristocrat of culture". In neither case has this anything to do with academic knowledge, but rather of knowledge and culture acquired by means other than those of schooling.

In both cases, the concept is that of a solitary learner, completely isolated, who fixes his own objectives, contents and methods. Furthermore, these same factors are not clearly explained. Solitude does not have the same value in each case : just as much as it has positive aspects in the example of the aristocratic autodidact (will, choice) so it has negative ones in the case of autodidaxy for the "excluded" (solitude due to restrictions expressed in terms of isolation).

In the first instance, learning is a laborious task: the individual has access to culture only with considerable personal effort and strong possibilities of failure.

In the second, learning seems to entail but little effort, being luxurious, easy, appertaining to leisure in which material difficulties are more or less non existent - or at least swept aside

The first type of autodidact is misunderstood, indeed even ridiculed by the educational establishment, in particular the University.

In some ways, he has the same relationship with culture as the opportunist with money.

Within the same sphere of representation, it is shameful to be an autodidact. However, the roles are reversed and become positive in a new socio-economic context (for ex: in the 19th century - the idea of the self made man in the US). Finally, outside the context of the economically developed countries, the negative aspect of the autodidact would tend to be modified: even if the traditional image persists, it is inevitable that institutions give a positive value to new ways of learning - amongst which autodidaxy would be an essential component - given the penury of existing means. A question was thus raised during the meeting: could autodidaxy - and how - become operational in school situations? Can it become a method of mass education? This is radically different from the concept of the autodidact as an individual confined in total solitude.

These images only concern the exterior, manifest aspect of the autodidact. They refer to the manner in which he inserts himself into society. It is probable that the importance given to this patent aspect, at the expense of the autodidact's own experience has been induced by the absence of precise knowledge (surveys, interviews, participation etc) of the autodidactic "public".

Following this line of reasoning, the experts sought more to treat autodidaxy as a learning process amongst others, leaving aside the autodidact as a person.

In this way, autodidaxy was considered within the framework of approaches to an educational strategy. These strategies themselves can only be defined in reference to specific social and political systems. In this respect, the participants lacked concrete information on educational experiences of the different countries represented.

The meeting thus brought to light a new meaning to the term "autodidaxy": collective autodidaxy, where solitude no longer refers to enforced isolation of an individual, but individuals belonging to a group in an out-of-school learning situation where objectives, content and methods are collective (ex: unions, parties, deprived social groups, district residents associations etc).

3.2. The field of action of autodidaxy

The traditional image of the autodidact as the orphan of culture is associated with traditional fields of knowledge i.e. scholastic ones.

The autodidact learns on his own the curriculum he would have used collectively in school. Scholastic values are advocated, as is the tradition of splitting knowledge into subjects. It is thus integration that the autodidact seeks. On the other hand, with the privileged "aristocratic" autodidact, the area covered is more diverse: he even seeks access to subjects not ordinarily covered by the school curriculum.

The more the meeting departed from the traditional image of the autodidact to contemplate autodidaxy as a learning process, the more marked became the trend to include areas of knowledge and abilities outside the curriculum defined by the educational institution.

Collective autodidaxy is, without doubt a most promising field about which research could most usefully be conducted.

The following situations were indicated: Feast days in Spain, (E. Gelpi), the development of the "law of associated work" in Yougoslavia (cf. V. Jancovic's report : Social validation of autodidaxy, annex 1.3) projects in Guatemala within the French Resistance movement (B. Caceres) etc. If a more profound analysis of the fields of pertinence of autodidaxy is desired, then specific case studies must be proposed (cf. recommendations).

3.3. What are the reasons for an autodidactic situation

Motivations can be divided into two groups: those of the learner and those of the school and out-of-school institution

a) motivations of the learner

Because of the lack of scientific precision of material available on this point, it is difficult to establish anything other than a provisional and limited list:

- desire to know
- desire for adventure
- cultural interest
- interest in games
- personal development
- increase of communication
- social integration
- professional adaptation and insertion into a profession
- shyness
- rebellion
- refusal
- identification
- militant motivations

Following what has been said in the report on autonomous learning in the field of foreign languages, most motivations are rarely explicit in language learning: a certain bias is even possible and if the demand for foreign language learning can hide a demand for instruction in the mother tongue, a similar diversion of motivations could well exist in other fields. It should be noted that these different motivations can be seen in both individual and collective forms of autodidaxy.

b) institutional motivations

This is the name given to the inducements made by institutions or social organisations seeking to develop knowledge or abilities.

- technical and scientific evolution

- penury of teachers necessitating the implementation of autodidactic and collective educational technologies (ex Turkey, Canada, medical training.

Most of the examples cited are ascribed to reasons of economy. The development of autodidactic learning is concurrent with the mass production of educational technologies (audio-visual, informatics) and the demand for democratisation of education. In developed countries, there is an additional factor, that of occupying leisure time.

The institutional motivations of autodidaxy explain the interest which institutions have in developing this type of learning situation (cf. section 4 of this report) and the way in which they support it. This lead the meeting to distinguish two types of autodidaxy: pure autodidaxy and assisted autodidaxy (cf. part II of this report). This differentiation does not prejudice the different degrees of autonomy which can be found in autodidaxy. This point, touched upon during the first section, has been taken up again several times: the participants continually stressed the validity of autodidactic situations promoting autonomy and expressed a desire to see them developed.

3.4. Need for a typology of autodidactic situations.

The interest of producing such a typology was stressed, and several draft typologies were proposed. The following typological indicators were mentioned:

- by field of knowledge or ability

- by social group

- by reference to the school

- related to the degree of autonomy induced

- related to the level of economic development

In order to define these indicators, a preparatory study comprising two selective parts was envisaged;

- by country with reference to the development of the educational system and economic development
- by social location (work, leisure, school, district, union, party) with reference to the characteristic elements of these sites.

A common matrice would seem to be called for if such a study is to be produced.

PART IV

Autodidaxy and educational institutions

The relationship which exists between autodidaxy and the educational institution was a key-point for discussion. The first years of education leave an indelible impression on how the adult sees education so far as motivations, relation to knowledge and methods are concerned. Conversely, institutions in the formal system can render an irreplaceable service to lifelong adult education at all levels of autonomy, including the relative non-scolarity which is to be found in autodidactic procedures.

Discussions were developed around these two points of articulation at two relatively independant levels: that of the support which the school system can provide to the adult autodidact in terms of manpower, facilities, pedagogical material within a framework of "guided" autodidaxy and that of the role which initial school education can play in promoting the future autodidactic behaviour of the adult.

This second level is dealt with here; the first will be discussed in section 6.

Two ways of approaching the relationship between autodidaxy and the educational institution were proposed, indeed even opposed, at times quite strongly by the participants.

It seemed possible either starting from experience gained in some institutions from activities encouraging the development of autonomous learning aptitudes in the pupil to examine how previous education could prepare the adult for autodidaxy, or, conversely starting from the autodidactic situation of the adult, its realities and prospective development and, based on a thorough analysis of its sociological, psychological and pedagogical aspects, derive conclusions for initial education and for any eventual modifications needed in the educational system.

This second approach was chosen by most experts insofar as they were less concerned with improvement of the school system than with an analysis of the possibilities it can offer for preparation for autodidaxy and, in so doing, viewing the educational institution within the perspective of lifelong education.

4.1. To condemn the school ?

It could be thought that the exploration of the possibilities afforded by autodidactic learning situations would have lead many participants to a radical re-examination of the school system. But, for most of them, the affirmation of the interest which the development of autodidaxy represents is not tantamount to a condemnation of the formal educational institution.

On the contrary, the specific contribution of school and university structures appears irreplaceable both in terms of teaching services and the corpus of established knowledge they can provide. Recourse to autodidaxy should not appear as a substitute for these structures, the maintenance and development of which are essential. In particular, the promotion of autodidaxy should in no case be taken as an excuse or an alibi for refusing to grant initial formal education its own decisive role and the means to preserve it. The experts stressed the dangers of such choices; this will be dealt with in the next section.

This is not then a seclusive relationship, but one of complementarity; if, for example under certain circumstances - for instance in developing countries - recourse to autodidaxy in certain areas for a certain period of time appears to be a necessary strategy, an obligatory stage of development, this should not be seen as an obstruction to the development of national educational structures, on the contrary.

More generally, autodidaxy should be considered as a continuation, with different modalities, of initial education. The experts even thought it desirable that, so far as possible, a rotation between autodidactic and formal instruction periods be organised. (A description of the Yougoslavian experience in this field is given in V. Jancovic's report).

"Bridges" should, whenever possible, facilitate transition from one to another of these learning situations. This brings up the difficult problem of recognition of autodidactic acquisitions by the institution which will be discussed in part 7 .

Briefly, autodidaxy, far from being an insurrection against the school can only be implemented within a global strategy of educational development and with the support and assistance of the school system, whatever the reticence and resistance it now encounters, not only from authority, but also from educational structures and the teachers themselves.

These resistances are particularly marked in cases of collective autodidaxy.

4.2. Educational institutions and preparation for autodidaxy

The experts raised questions on the kind of assistance initial school education could give to future autodidactic learners They attempted to list the aptitudes which it would be desirable for the school to develop in its pupils to prepare them for effective autodidactic learning. The main points of the discussion can be resumed as follows:

- in order to prepare pupils for autodidaxy, the first duty of the school is not to destroy the taste for learning, but if possible to inculcate it.

This is perhaps an unsophisticated remark, but it serves to introduce the kind of new relationship to be developed between school and autodidaxy if it is seen in the light of the evidence of the "negative" motivation for autodidaxy often mentioned during the meeting, by which the choice by adults of this learning method today appears to be particularly due to the negative image of school and their aversion to it.

- the school should then develop aptitudes for autonomous work: learning to learn and, first of all, developing in the learner the ability to fix his own learning objectives, deciding upon a subject in a coherent way, whilst remaining conscious of how it is linked with overall knowledge and abilities. It is the absence of this aptitude which begets the traditional literary cariacature of the autodidact.

- learning to learn is also to develop the learner's ability to choose the educational resources which he should use according to his needs, potentialities, objectives, means and limitations, as well as his ability to build up learning strategies

- learning to learn is also to develop the ability to make use of these resources: the autodidact should be able to select what is relevant for his chosen project and strategy from the mass of information available. He should be capable of intellectual concentration, able to organise his thoughts and decode a message, whether it be textual, auditive or visual.

- learning to learn is to develop the learner's ability for self-evaluation.

So far as these five objectives are concerned, the importance of these new pedagogies is far from being negligeable; this is a good enough reason for encouraging and developing present experiences, despite the resistance of certain parents and teachers which represents a significant psychological and social barrier. The "child" it has been said "should learn because of recognised needs and by practice". If the need to learn is to last not only throughout school life, but furthermore stimulate creativity in the pupil, it would be advisable to encourage free choice of subject matter and learning modalities and, above all, perhaps to link schooling more closely to life from which the autodidact must later draw the impetus and resources necessary for his self-learning project: without this link, academic knowledge ceases to be mobilisable once school is finished. One example of this is the very limited number of adults who, in developed countries where theoretically the rate of literacy is high, really read once they have left school because they have learned to read, in, by and for the school.

It is also recommended that educational buildings be designed for autonomous learning.

Given the importance of the rôle which autodidaxy for adults seems called upon to play in the future, it is clear that preparation for autonomous learning becomes an important dimension in any school policy aiming at equality of opportunities without which there would be on the contrary, a great risk of inducing increased inequality. (see part 5).

4.3. Teachers and autodidaxy

It is not enough, however, to stress the importance of the stake: the stumbling blocks still have to be located and the conversion of mentalities necessary to abolish them has to be defined; the importance of the teacher's attitude has been emphasised. If he does not join in with the idea of autonomy, then no preparation of youth for autodidaxy will be possible.

There will be no evolution in the attitude of the teacher unless he is assured that autodidaxy is not seen as a rejection of his contribution, a negation of his specific role of teacher, but rather as an inducement to rethink his role, to modify it in a way which conforms to training in autonomy, as an invitation to prepare himself to implement it.

If the school gives itself the objective of developing the ability of learning to learn, the teacher should learn to learn to learn. It is however, difficult to see how a teacher could teach autonomy without himself having an autonomous attitude to what he knows and to his own teaching practice.

It is thus at the level of those responsible for teacher training - Universities, Teacher Training Colleges, etc., that a decisive step should be taken: these institutions should pursue the objective of development of autonomy in teachers. Without this they will not in turn know how to teach autonomy; they should - if we can take the liberty of using such a cascade of words - teacher the teacher to learn, to learn to learn.

PART V

The limits of autodidaxy

The experts stressed several times that the objective of the meeting was not to study ways in which to promote autodidaxy a priori, but rather to study under which conditions, with what modalities and with what precautions autodidaxy can provide a solution to certain problems raised by adult education.

On closer examination, it appeared that, whatever interest autodidactic learning can have for certain groups of adults, it should not be presented as a panacea for all educational problems.

The limits of autodidaxy, whether political, socio-economic, geographical or pedagogical, must, therefore be mapped out.

5.1. First and foremost, care should be taken so that systematic promotion of autodidaxy does not lead the authorities to become less concerned with school systems, either to camouflage the failure of educational policy, or as a justification for a lack of interest in schools, because their expectations are placed elsewhere. It must be clearly stated that autodidaxy cannot replace the school and that both in preparation for autodidaxy, (as seen earlier), and in assistance (as will be seen later) the positive development of autodidaxy, on the contrary, is dependant upon an increased role of educational structures; blind praise of autodidaxy which would divert the attention of efforts to be made in education would therefore go in the opposite direction to a genuine development of autodidaxy in the service of lifelong education.

This risk is all the more present in that we know with what ease in education the most liberal ideas can be offset and diverted by the machinery of state, whatever the surrounding socio-economic system. Care must be taken to ensure that projects of autodidaxy and, more generally, of autonomy, do not degenerate in this way giving public authorities a sort of alibi for their desertion of the school.

5.3. It was shown earlier that one of the new tasks of initial education in school with a view to development of autodidaxy consisted in preparing future adults for autonomy. This is the price to be paid if autodidaxy is to contribute to equality of opportunities in the field of education.

If the responsibility for training for autonomy is not assumed by a democratically open school, the "knowing how to learn" will remain the privilege of an elite, which will strengthen the socio-cultural inequalities and perpetuate the image of the so-called "aristocratic autodidact".

On the other hand, even if actual preparation for autonomous learning has been implemented by the school, the fact still remains that the cost of access to resources gives rise to monetary discrimination strengthened by the establishment of what has been called the autodidactic "market". To cite an example, the generalisation of the "cassette" suggests generalisation of cassette players in all homes, which is far from being a reality even in industrialised countries.

5.3. This social "disparity" is increased : particularly in rural areas where geographical distances are very difficult to overcome, practically prohibiting access to resource centres, libraries etc.

5.4. These inequalities, in particular those of a socio-cultural nature are such as to render autodidactic learning extremely difficult insofar as they give rise from the start - from the pedagogical point of view - to a defeatist attitude. This lack of self-confidence accentuated by, and very persistent whatever the socio-economic environment, or social stratification, especially for adults who have most often been excluded from the educational systems, can generate feelings of failure. This is even more reinforced by the autodidactic learning material, which ceaselessly calls upon the learner to self-evaluate, which is, as will be seen, particularly difficult for the autodidact, and multiplies the use of recall and controls etc.

5.5. Finally, autodidaxy, insofar as it is a solitary act, will not give rise to exchange - the main wealth of the educational process. The example of foreign languages illustrates this point quite well : is it not a paradox to claim to work on languages, which are the mainstay of communication, whilst denying oneself the possibility of communicating by language. Here, we arrive at the probably irreparable poverty of autodidactic learning, less in terms of acquisition of knowledge than in those of structuration of knowledge, cultural fulfilment, pleasure.

PART VI

ORGANISATION, METHODS AND MEDIA OF AUTODIDACTIC SITUATIONS

6.1. To help the autodidact

The need to organise more effective social assistance for autodidacts was confirmed by all the experts, even if some of them considered that assisted autodidaxy should not be seen as an end in itself, but as a step towards wider autonomy. These experts felt that care must be taken to ensure that the assistance given does not become a handicap to the development of independance of the learner.

The autodidact comes up against difficulties, in particular psychological and pedagogical ones in his self-learning. The isolation of the autodidact and feelings of failure which this could involve has already been discussed. This is particularly relevant in cases where the learner finds himself face to face with media. What are his reactions? To which media has he access? How to use them? How to select them?

In such a situation maximum support should be given to the learner. The problem is to know how to help him, with existing resources, to learn to learn, to communicate and to manage his own learning. To do so, the "environment" and the conditions which will promote assisted autodidaxy must be defined.

Society should not only offer the cultural and scientific environment necessary to learning, but also facilitate access of the autodidact to resources to help him fix his objectives, organise his work, understand the relative effectiveness of the various strategies possible for acquiring knowledge.

Some experts felt that a distinction should be made between autodidaxy linked to cultural needs, for which society should make resources available and autodidaxy oriented towards professional acquisitions for which society's help should be much more structured and extensive.

School should not be the only institutions responsible for helping the autodidact. Other bodies should intervene: Ministry of Labour, Communities etc.

Some experts emphasized the risks attached to too much social intervention: one of the most interesting characteristics of autodidaxy is that it permits the acquisition of marginal knowledge and subjects other than those imposed by the ideologies proper to a specific society. These possibilities must be safeguarded.

It was also stressed that the help of society cannot be contemplated in the same way for developed, developing and least-developed countries. These countries do not have the same material and human resources at their disposal.

6.2. Access to resources and the role of media

Considerable technical progress over the last twenty or thirty years has resulted in an extraordinary increase of educational resources which tend more and more to be grouped under the term "media".

Recent experiences tending towards individualisation of training, research on autonomy of the learner and studies about autodidaxy have shown the determinative role of media. For several experts, all these experiences had in common the changing rôle of the teacher or trainer and, in particular, the reduction of his intervention in the transmission of knowledge.

However, it must be borne in mind that this new trend, which aims at putting the learner in immediate contact with sources of information refers back to these same sources. Their nature, methods for their production, mode of communication, indeed their authors, are far from being indifferent. A programme conceived for a given public is not necessarily useable "tous azimuts" and products for "all types of public" often do not suit any.

To give an example, given the carrier chosen for its dissemination, a given programme is not accessible to everyone in the same way: a printed text remains difficult to use for those who do not have regular reading practice; as to audio-visual programmes, it is only just being admitted that their "reading" is not as immediate and natural as one would like to suppose and that some previous training is required.

In another respect, modes of presentation, pacing, methods used in one or another document suit an individual more or less and their effectiveness varies considerably according to the situation; even with equal effectiveness from the point of view of transmission of content, the choices made consciously or not by the author or authors modify the nature of the learning. Each step encourages more or less a certain attitude, a certain competence, and, from a qualitative point of view, all phases are not valid insofar as they do not result in the same structuring of knowledge.

The learner depends to a certain extent on the instructional tools at his disposal; and, if autonomy is to remain one of the objectives of innovative efforts it is of capital importance to dispose of instructional tools adapted both to the target population and to their training situations and which are relevant to the overall objectives pursued.

How far do recent experiences owe their rather disappointing results to the lack of qualitative standards in the choice of pedagogical tools or in their accessibility? How far are media accessible to learners, particularly autodidacts? It is regrettable that the mass of today's knowledge is not - or very rarely - disseminated due to lack of means. Whereas, access to media and their use is a determinative factor for true autonomy of learners and equality of opportunity.

In the short run, the learner should be encouraged to make use of existing resources. He should train himself (by projections of films or slides, reading, discussions etc) to know how to make a critical choice of media and use them independantly for his own evaluation, thus supressing the constraint of external evaluation by teachers or the computer.

Access implies the existence of resource centres open to all, equipped with clearly designed easily handled material - according to the infrastructure of the country and the corresponding cultural and technical level - so that the learner would be encouraged to use these media and his initial motiviations would be preserved.

The success of the Georges Pompidou Centre in France (which was visited by the participants) is particularly significant here. In its public library and mediatheque various easily manipulated resources are placed at the disposal of the public, free of charge. This is an answer to the needs and motiviations of those people wishing to learn. It is characteristic that, after the sightseers and the students, it is the job seekers and unemployed who go there to learn something, to teach themselves something or to recycle themselves.

6.4. The rôle of associations, Collective autodidaxy

Ways in which the autodidact can be helped should be the responsibility of the community as a whole. This does not mean that the community should impose a uniform structure on the autodidact.

Autodidaxy should be organised in a decentralised manner, supported by initiatives of various organisations (cultural, unions, political and other) or voluntary grouping of the learners (collective autodidaxy).

This collective autodidaxy could be carried out within modern institutions, at work, or in leisure time.

Material and financial aid given by state bodies should not, of course, convert these associations and groups into an instrument destined to deprive them of some of their independance by directing the autodidactic projects.

Collective autodidaxy seems to be a very promising solution and an important field of research for the future. Many experts thought it was more efficient than individual autodidaxy both from the point of view of economy of resources and as a remedy for the risks of isolation of the learner.

Collective autodidaxy could possibly facilitate the implementation of society's support to the autodidact.

It would be interesting to make an inventory of experiences already carried out in this field, based upon which the questions raised above could be dealt with in depth.

PART VII

Evaluation and recognition of autodidactic acquisisions

7.1. Evaluation and validation

By evaluation we mean the measurement of accomplished progress.

By validation we mean a judgement of the value of this progress in relation to a threshold or norm fixed by an outside body.

This outside body can be an authority, a social institution. In this case we would speak of "social validation" and "authentication". It could be simply reality itself: feedback from the environment related to the activities carried out by the learner using his autodidactic acquisitions (reactions of others, the materials he wishes to transform etc.)

The learner succeeds or fails. There is success or failure. Here we will speak of "validation by reality". If electrical circuits are studied, validation by reality will be the fact that an electrical installation works or does not. This is totally different from a diploma attesting that the skill needed to install an electrical circuit has been acquired.

7.2. Self-evaluation.

"Self-validation" is a contradition in terms, because validation always implies the intervention of an outside body.

One can, however, speak of "self-evaluation" (or of self-accomplished evaluation oppesed to "hetero-accomplished evaluation"). Self-evaluation was the subject of a report presented by E. Heidt (in annex to this report), the essential of which was the following:

Evaluation is a cardinal factor in learning insofar as it permits a judgement of the value of the work accomplished and of the future evolution needed.

There is abundant literature on so-called "external evaluation" (various types of tests etc) as traditionally undertaken within an institutional framework by learners or by machines. On the other hand, relatively little information exists on the methodology, the effects and effectiveness of the so-called "internal evaluation" or the learners own evaluation - even though the term self-evaluation is used frequently today in research, but often in a vague and inappropriate fashion: textbooks generally propose possibilities for self-assessment in their accompanying literature (exercises, questions, individual work etc).

External evaluation and self-evaluation are not mutually exclusive alternatives. In fact they are interdependant and complement each other in most instructional situations. What must therefore be ascertained is the proportion of each, the freedom of decision and the degree of self-evaluation of the individual learner.

If it is deemed that a good assessor should have two main qualifications

i) be an expert in his subject and know how to select and apply the appropriate techniques and (ii) be objective in his judgement, self-evaluation will involve two problems:

- Can the learner be acknowledged to have the necessary competence to make an objective evaluation of his own learning.

Even if he has this necessary competence, how will he behave in a competitive situation where the results of his self-evaluation will have a consequence on his future. Of these two problems, one emphasizes the learner's need to get to know the processes of evaluation as soon as possible in order to acquire the desired competence and the other the constraint which external evaluation imposes and the need for more flexible conditions.

The analysis of the practical applications of self-evaluation is especially interesting. Self-evaluation has been undertaken in many situations, from primary teaching to adult education - especially distance teaching, teacher-training, language teaching, programmed instruction, project learning and student-teacher contracts.

So far as adult education in general is concerned, it seems that, compared to children, adults are capable of self-evaluating their own progress and performance in a sufficiently objective and precise manner. The problem for them is not therefore the acquisition of the cognitive aspects of evaluation, but the fact that they are not used to self-directed learning and their reluctance at openly exposing their level of ability. It is thus suggested that learning systems and materials for adults be developed in a way which will enable self-assessment without risking embarrassment or ridicule.

The success of the so called "micro-teaching" method used today for teacher training seems largely due to the fact that self-assessment which plays a preponderant role therein, is not used as a method of marking the learner, but simply to improve his performance by giving him the opportunity to observe himself and obtain immediate feedback.

Feedback is one of the basic principles of programmed instruction which is at the origin of self-evaluation, another principle being that of progression by steps and the control this imposes before the learner can move from one to the other. Structural communication which is derived from this, displays a marked progress in programmed instruction, gives the learner greater freedom and more possibilities in the construction of his answers. In exchange, he receives precise detailed feedback in the form of analytical discussion which allows him to objectively evaluate his work.

Student teacher contracts and project methods attempt to develop competence in self-management of learning and lead the learner to at least participate in the evaluation of his performance and at best to objectively acquire the ability to auto-evaluate.

The conclusions of research in the field of auto-evaluation show that

- The self-evaluating learner tends to stay within average estimations. In case of need, he overestimates, rather than underestimates his performance
- young self-evaluating learners in particular tend to make poor use of self-assessment, to lower the required standards and even cheat.

Self evaluation is considered desirable for reasons of

- ideology or philosophy (autonomy of the individual)
- psychology (long term effects favourable to lifelong education)
- economy (self evaluation is less costly than traditional evaluation.
- pedagogy (impossibility of carrying out external evaluation with autodidactic learners who learn outside official institutions).

But, if self-evaluation is desirable, it is still difficult to fully achieve, and remains more often than not linked to external evaluation. However, given that the learner has the ability to self-evaluate he should be trained through appropriate methods in all the different aspects of self-evaluation. The problem of effectiveness of self-evaluation remains absolute so far as all autonomous learners and autodidacts who do not frequent official or private educational instituions are concerned and who do not try to obtain diplomas and cannot therefore be known. Even in a situation of total autonomy, as for example in the German experience of the "working school" (Kerschensteiner and Gaudig - cf report E. Heidt in annex) the student overlooks all the norms if he has not been trained in self-assessment techniques which he can apply during his self-controlled learning. In the end he turns to the teacher for the evaluation of his achievements which is necessary for his social validation.

Successful self-evaluation is closely linked to access and the possibility of using material resources which often include instruments for self-assessment (tests).

7.3. Social validation

In the past, autodidaxy has often been considered as the privilege of an intellectual elite, a marginal activity, a luxury. Nowadays it seems more and more essential to consider it as a much larger phenomenon, concerning training and culture of the masses. The problem of social validation, of recognition of autodidactic acquisitions by society is no less important. For many experts, the goal sought by many autodidacts is less social success than personal satisfaction and it is this satisfaction which provides the validation. It is nevertheless indispensible that society offer the individual the possibility of validating his autodidactic work if he wishes or needs to. This is not a simple measure of justice, related to social promotion and remuneration, but an important factor for the promotion of autodidaxy, and motivating the learner.

Recognition of autodidactic acquisitions by society is more or less easy according to the subject. Art or politics seem most favoured from this point of view, rather than for example, physics or medicine; many universally recognised artists have not been to art school; there are no eminent physicians recognised as such who have not attended University.

The problem of structures and methods to be developed for social validation seems very complex and research on this subject would be valuable.

The recognition of autodidact acquisitions should include recognition of acquisions obtained in social and professional practice. Weighting systems must be set up so that school diplomas are not the only ones taken into account. Recent experiences in Yougoslavia were cited several times (cf. report presented by V. Jancović; here the ways in which the last experience to date was carried out are retained). In this experience, training starts from on-the job experience: the autodidact acquires certain knowledge during working hours at work. His employers are lead to recognise his talent. The worker is subsequently allowed to complete his knowledge in State institutions; this new knowledge is validated by a diploma.

The problem of social validation is linked to various political problems which were emphasised by some experts:

The autodidact has often been a factor of social change. Institutionalised teaching tends to wield a reproductive function on society. Autodidaxy is a tool of transformation, of innovation. This can constitute one of the reasons for the difficulties encountered in social validation of autodidactic learning.

Conversely, it is not desirable that the establishment of social validation bring about a reducing effect which would deprive autodidaxy of its function as a factor of social evolution.

Social validation should not lead to integration, or conformity.

CONCLUSIONS

A certain number of conclusions which interpret the more or less common points of view of the participants emerged from the documents prepared for this meeting and from the debates.

Autodidaxy appeared to be very closely linked to what is nowadays referred to as lifelong education. This idea of autodidaxy has become a dynamic concept of modern society as a whole; but, it is generally perceived in two different ways: one gives it a much wider meaning and links it to the overall theory of society and its organisation; the other is less prominent, setting autodidaxy within narrower confines, limited to the field of learning and self-learning.

It should be noted that this situation reflects more or less that existing a decade ago for educational technology; for some this was a conceptual approach, a reconsideration of educational systems dependant upon systems analysis; for others, it was limited to audio visual media and the usual "hardware" of education.

Taken in its wider sense, the notion of autodidaxy nowadays is, in terms of international cooperation, a "locomotive" one.

In this reppect, the meeting posed the problem very well: whilst institutioral teaching results more in reproduction of knowledge, autodidaxy permits transformation and change in its acquisition. It was therefore legitimately qualified as a factor of innovation.

In another connection, it was stressed that no "pure" "unassisted" autodidaxy exists. Its practice is always related to concrete situations and involves levels of autonomy. In the same way it is not always the result of voluntary choice and positive motivations; it is often a product of necessity, of various socio-psychological, socio-cultural, socio-economic and socio-political constraints, or due to factors such as geographical isolation, a negative image of the school, restriction of time etc. This is why the work of an expert meeting is not to settle these matters once and for all, but to seek a more balanced approach to adapt the modalities of autodidaxy to the modern world and to reduce the gaps existing so far as access is concerned.

Autodidaxy is, in effect, the concern of the whole community. Prepared within the framework of educational institution by the development of "active learning methods" (implying amongst others, adapted teacher training) it can only be validly organised in a decentralised manner supported by voluntary organisations such as associations. In addition, the achievements of autodidacts should benefit from social, economic and cultural recognition. This supposes the definition of modalities for material rewards (remuneration, professional promotion etc), recognising effectively acquired knowledge for those autodidacts who so desire. Such validation could contribute to erasing the reserve with which results obtained by autodidactic methods are still too often greeted and the persistent slight discredit attached thereto.

It is encouraging that the demand for autodidaxy is on the incease in all sectors of society: teachers, physicians, professionals, workers etc.

Moreover, autodidaxy responds to the acceleration which characterises the emergence and conversion of knowledge. Everyone is aware of the gap which exists between content and curricula of most educational systems and the realities proposed by the modern world. The one is about a generation behind the other. It is hoped that recourse to autodidaxy will mean faster rotation of knowledge and more flexibility in sequencing.

Autodidaxy should not seem to be a panacea. Alongside its positive aspects, several experts mentioned the existence of a certain number of possible risks. For this reason, it would be dangerous to give in to the temptation of turning to autodidaxy at the expense of existing educational systems and schools. The two systems should not, however, be placed in opposition, but reciprocal exchanges between the two should be sought, bearing in mind the fact that certain procedures proper to autodidaxy can help in adapting the formal system and that, conversely, as has been stated, autodidaxy should make use of experience acquired during schooling.

Another possible danger: that of strengthening the social, cultural isolation and resultant inequalities of certain categories of the population when in autodidactic situations.

These points should be examined with the greatest care. It appeared that further examination starting out from the conclusions and recommendations of this meeting is needed to continue to take stock of and explore the multiple possibilities offered by autodidaxy. A short meeting could set out the problems and suggest orientations, but it could neither pretend to cover so vast and varied a field, nor come up with solutions or recipes for success. As it stands, it is certain that this meeting will have played a role in the future of education, a field to which Unesco dedicates considerable effort.

On these grounds, this report could serve as a basis for case studies, within the future programme of Unesco, in liaison with other disciplines, in particular the social sciences (e.g. for the analysis of motivations). It is probable, therefore, that other expert meetings will be needed for which the work programme elaborated and proposed by this meeting could serve as the fulcrum and reference point.

The participants of the meeting invite Unesco to take note of their recommendations and to bear them in mind when elaborating its next three-year programme.

RECOMMENDATIONS

At the close of work of the commissions, groups and plenary sessions, various recommendations were adopted. These are grouped and presented below in an order which corresponds to each section of the Final report.

1. Prepare an inventory of terminology, highlighting the wealth and variety of terms and their meanings. This inventory should serve as an instrument of reference at the international level.

2. a) Draw up a set of hypotheses in order to establish a typology of autodidactic learning situations;

b) Identify the impediments to autodidaxy and factors which, on the contrary, promote and encourage it.

c) Validate work carried out under (a) and (b) above, through examination of certain cases chosen because of their exemplary nature;

d) Based on this work, invite member states to report on the situation in their respective countries in order to establish a worldwide description of autodidactic learning situations.

e) Disseminate information on experiences carried out by Member States, from which comparative studies could be undertaken based, amongst others, on the recommendations of the Unesco Technical consultation (Madrid 1978) on Foreign Language Learning (1)

3. Promote research

- on the effectiveness and effects of autonomous learning in school, as well as on the development of aptitudes necessary for the adult autodidact

- on the methods to be implemented to effectively develop autonomous learning within educational systems (teacher training, school buildings and materials, curricula and examinations, granting of diplomas, evaluation and validation)

4. Attempt to measure or assess the effectiveness of autodidaxy faced with the considerable increase of knowledge, in relation to the level of development of educational systems and the socio-economic infrastructure, as well as with the needs of society.

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(1) See annex 1.1.

Study in particular the benefits which autodidaxy can offer in countries where the development of educational institutions is still insufficient

5. Promote research

- on textbooks as support material for autodidaxy
- on the róle and use of media as autodidactic tools
- on the role that various social institutions can play in the development of autodidaxy (social groups, associations, cultural institutions)
- on the organisation, equipment and use of space in cultural centres to encourage autodidaxy.

6. Invite Member States to study the socio-economic and pedagogical conditions which permit social validation of autodidactic achievements, taking into consideration the value of "on-the-job" self-learning.

In addition, the participants would like to see further work carried out on a certain number of topics which were not, as they would have wished, examined in depth during the debates - especially in fields other than foreign language learning and literacy, as well as topics dealing with motivations, risks of strengthening social inequality, psychological barriers, pre-requisites, instructional resources.

ANNEX

NOTE

Several documents were distributed to the participants during the meeting but were not discussed.

In particular:

Allen TOUGH (Ontario Institute for Studies in Education)

Major learning efforts : recent research and future directions (25 pages)

A.R. ARUTJUNOV et L.B. TRUSHINA (U.R.S.S.)

The ideas of compensation in self-teaching coursebook (6 pages)

Université de Montréal (Service d'éducation continue)

Cours autodidactique de français écrit (C.A.F.E.)

Presentation of the UNESCO research project

"A CRITICAL ANALYSIS OF FORMS OF AUTONOMOUS LEARNING (AUTODIDAXY AND SEMI-AUTONOMY) IN THE FIELD OF FOREIGN LANGUAGE LEARNING"

Paul CHAIX

Ecole Normale Supérieure
de Saint-Cloud (France)

Meeting of European experts
on the forms of autonomous
learning

Paris, 16-19 October 1979.

PLAN

1. General presentation of study carried out on modern languages.
2. Definition of concepts.
3. Presentation of working document and corpus selected.
4. Analysis of main sections of the analytical charts: principal questions arising and answers received.
5. Correlations made between factors selected.
6. Establishing a typology.
7. Implementation of semi-autonomy and autonomous learning systems.

1. GENERAL PRESENTATION OF STUDY CARRIED OUT ON MODERN LANGUAGES

The full title of this study and the final report summarizing its conclusions is:

A critical analysis of forms of autonomous learning (autodidaxy and semi-autonomy) in the field of foreign language learning

In French:

Étude critique des Modalités d'Apprentissage Autonome (Autodidaxie et Semi-autonomie) dans le domaine de l'acquisition des langues vivantes secondes

In 1975 the UNESCO Secretariat, with the help of the French National Commission, asked a research group from the Ecole Normale Supérieure de Saint-Cloud (Centre Audio-Visuel) to carry out this research in the field of the acquisition of some modern languages in Europe.

This involved:

- making an inventory of materials, systems and courses of this nature which are available in Europe for four widely-spoken languages (ENGLISH, FRENCH, RUSSIAN, SPANISH, at all levels). Radio and television programmes were not to be included.
  - . the age group selected was adults and older adolescents,
  - . the countries involved were FRANCE, THE NETHERLANDS, SPAIN, SWEDEN, THE UNITED KINGDOM, USSR, (countries in which the four languages are spoken plus two countries where several languages are commonly spoken).
- analysing these different materials and systems (or as representative a cross-section as possible) with the help of analytical charts.
- working out criteria for establishing a typology and making a classification,
- interpreting the results so as to give an account of current trends in this field,

- making an inventory of the original aspects found for this kind of learning,
- providing suggestions for a possible model for a study of this type of learning in fields other than modern languages.

Why were modern languages chosen?

- on one hand because of the large number of learners concerned in each country,
- on the other hand, because of the highly representative nature of the subject even if obviously certain characteristics are specific to language learning.

The field chosen was deliberately limited. Research was centered not upon learners, but upon learning materials. Two questions could then be asked:

1 Are available educational materials and specialized systems in fact suited to autonomous or semi-autonomous learning?

2 Under what conditions is this type of learning effective?

Only one of the questions - the first - was taken up. The study attempted to analyse the different aspects of the answer to this question.

The chronological sequence of the project was as follows:

- it lasted 3 years (1975-1978),
- a working group of European experts was formed and operated with two aims in mind:
  - up until 1977: preparation of a common working document (with a meeting in Paris in February 1977),
  - from 1977 to 1978: application of the working document and analysis of results,
- the final report was written in May 1978*,

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* A critical analysis of forms of autonomous learning (autodidaxy and semi-autonomy) in the field of foreign language learning - Final Report
Paul Chaix - Charmian O'Neil UNESCO Ed.78/WS/58 224 pages + appendixes

- a coordination meeting took place in Madrid in September 1978 and was attended by the members of the working group, plus a certain number of specialists. Following this meeting a document was prepared which took the form of Conclusions and Recommendations concerning modern language learning but also to some extent, autodidactic learning in general (cf appendix).

2. DEFINITION OF CONCEPTS

One of the aims of this meeting is in fact to reach a better understanding of the terms "autonomy" and "autodidaxy".

We felt it absolutely essential to have definitions that were more circumscribed if they were to be operational. In fact confusion is likely to arise as different, or even contradictory meanings are sometimes ascribed to the same word in this context, and the same words and expressions cannot be transposed or used directly from one language to another.

Among the terms commonly used in French we find:
"autonomie", "autodidaxie", "travail indépendant", "auto-apprentissage", "individualisation"...

and in English:
"autonomy", "self-directed learning", "self-tutoring", "individualization"...

Our definitions are based both on learning situations, and on the use of learning materials. They are therefore by nature limited in scope (especially as regards autonomy). As a reminder of the essential ones:

- AUTONOMOUS LEARNING: learning carried out without a teacher
- AUTODIDAXY: totally autonomous learning with no institutional framework whatsoever
- SEMI-AUTONOMY: partially autonomous learning situation
- INDIVIDUALIZATION: a learning process which takes all relevant aspects of the learner into account.

We have, however, especially when examining the systems, attempted to incorporate other aspects of autonomy which are often brought up by those interested in the subject, for example:

- learners' capacity to take responsibility for their own language process: this is a skill which can be acquired or developed,
- sense of responsibility and effort,
- possibility of making a free choice at each stage of the learning process.

Once these have been touched upon, it is also necessary to arrive at a better definition of autodidaxy as compared with autonomy, which is also the subject of the meeting .

3. PRESENTATION OF WORKING DOCUMENT AND CORPUS SELECTED

It was finally agreed that detailed analytical charts should be prepared, that a number of points should be allocated to each section, and that these should be applied to the learning materials or systems being examined.

Certain modifications were made to the charts in the form of regroupings and weightings by means of allocating coefficients in as rigorous a way as possible.

The regroupings and points for each set of learning materials are to be found in the summary which serves as a basic guideline, and the detailed analyses as well as the comments justifying the decisions are in the appendixes.

As for the definitive corpus (after gathering together of all relevant information and eliminating irrelevant analyses) it consisted of

59 courses for autodidaxy

21 courses for semi-autonomy (courses offering assistance for the non-autonomous learning activities).

Seven systems were also examined.

4. ANALYSIS OF MAIN SECTIONS OF THE ANALYTICAL CHARTS: PRINCIPAL QUESTIONS ARISING AND ANSWERS RECEIVED

We shall only present here what may be relevant to autodidactic learning processes in general. However occasionally we shall indicate the results obtained for modern languages when they seem interesting.

1 - IDENTIFICATION

It is essential to distinguish between the different types of learners according to their levels or interests, since the problems encountered are entirely different depending on the group, and they are not necessarily divided up as they would be in a formal educational system.

For example for language learning, beginners, intermediate and advanced students are normally distinguished. A further distinction is made between general and special purpose language, thus providing theoretically 6 types of classification.

We only distinguished three levels of study:

1. Beginners/Near Beginners
2. Intermediate/Advanced learners
3. Learners requesting special purpose courses.

This classification corresponds more closely to the content of the corpus that was examined.

2 - PRACTICABILITY

a) Aids and costs

The following should be taken into account:

- . the types of learning materials: text books, sound aids, audio-visual material, i.e. from paperbacks to video tapes,
- . the number of documents: too many can in fact prove to be a hindrance to the learner,
- . the format: material format and readability, types of tapes, cassettes or video cassettes, types of visual documents, fixed or to be projected,

- separate documents or concentration of entire set into a single learning kit or package aimed at varying degrees of thoroughness,
- cost, which is directly linked to aids, but also to other factors (learning load, time needed) which should be analysed as such.

In the case of language learning it may be observed that:

- cassettes are the most common aid as they are the most convenient form. However, apart from simply listening to the cassettes, little or no use is made of audio-active comparative devices enabling the learner to listen to himself, which is obviously most valuable,
- visual aids are often lacking or used simply to illustrate the text (pictures to go with the text). They should be used more systematically and functionally in the very design of the courses,
- there is a high degree of diversity as regards material presentation which is perhaps a good thing at this level,
- as regards written material, the paperback format is rather the exception than the rule (an average of one out of every four courses). This is rather surprising given the way in which the learning process in autodidaxy takes place: work at home but also in other places whilst travelling, between two working commitments or in difficult circumstances which do not allow bulky books to be spread out at leisure. When the course consists of a series of documents, it would be better for the text book to be easy to carry,
- the kits that were mentioned reflect a rather closed directive approach to learning, but are also the result of a desire to be practical and easily handled.

b) Time needed

- it is very difficult to estimate (even if one takes into consideration evaluation provided by the authors of the courses);
- there should not be too great an imbalance between the time invested and the expected results. This amount of time should also be linked to the type of work defined for the groups and learners' levels and to the advice if any. The important thing is that the learner should not work unassisted for too long a period.

In the case of modern language learning, time and learning load are only balanced in half the courses. As regards the type of aid, the balance varies a good deal according to the levels.

c) Learning load

It seems important to carefully measure and weigh the different components according to the sort of learning situation (e.g. grammar, vocabulary, phonetics...).

For languagesx 70% of the courses have a medium, fairly well-balanced load.

Where there is a lack of balance, it is worth noting that it is not mere chance but is in fact indicative of beliefs held about the type of learning aimed at. For example, Beginners are supposed to need more grammar, whereas Intermediate and Advanced learners are supposed to need more vocabulary.

3. SUITABILITY OF THE LEARNING MATERIALS TO AUTONOMOUS WORK

a) Learning instructions

It is very important that autodidactic learners - and to a lesser extent learners in semi-autonomy - should have precise learning instructions about the different components of the materials they are using. In fact, in the absence of detailed instructions, learners will use the materials according to the way they used to work in class and thereby fail to get as much as possible out of the course.

In particular it is worth analysing the presentation of new language items, the order and distribution of the activities and advice given on pacing.

b) Psychological help which includes encouragement, warnings and advice given at the beginning and throughout the course.

The learning instructions and the psychological help together make up the GUIDELINES.

For languages it may be observed that

- on the whole, the guidelines are inadequate. When they exist they consist mostly of encouragement and warnings, often made in a rather naïve and unscientific way, to the detriment of precise instructions concerning the organisation and the pace of work. It is essential that the learner should be given advice. Without the appropriate guidelines one fears that even a good course will be used badly, since the learner will find himself returning almost automatically to his previous learning strategies (which may have been more or less effective but which were developed within the framework of a collective learning situation),
- there is an almost complete lack of advice regarding work to be carried out beyond the course itself or information on second language learning, i.e. more generally, on how the learner should take full responsibility for his own learning or learn how to learn.

c) Variety in the presentation of new language items

For example

. is there one, or several registers being presented?

- is there a continuous text presenting the information and the activities or is part of the presentation of the new items carried out through these activities?
- are the same media always used?

In languages there is only a slight degree of variety on the whole. Perhaps the same is not true in other cases.

d) Reference material

- most important for autodidactic learners
- glossaries for each unit are necessary, but also a recapitulative one giving cross references for related centres of interest,
- techniques for going further than the suggested references and for using other sources profitably should be given.

For languages, reference material is generally available in rather incomplete form. It deals more with vocabulary and grammar than with phonetics which is given second place. Virtually no indications on how to use dictionaries or grammar independently of the course are given, whereas these could prove most helpful.

e) Exercises or activities

The questions to be asked concern:

- number,
- variety (what types are proposed?),
- correction and possibilities for self-correction,
- balance between "closed type" questions (only one possible answer) and "open type" questions (soliciting expression and creativity, but how are the answers to be assessed?). This is a very real problem that goes beyond the scope of language learning.

As regards the latter it may be observed that the courses provide numerous exercises, very often with a key, which corresponds to the learners' needs. Once again, however, they lack variety (only half the courses are sufficiently varied in this respect).

f) Assessment and tests

The following must be considered:

. type and periodicity

. kind of evaluation: "external" as regards content and standards fixed from the outside, or "internal", based on learners' needs and criteria of competence.

For languages it must be noted that few courses include tests (only about 20%), and that these are of the "external assessment" type.

g) Revision - this should play an important part as it is essential that the learner should consolidate his knowledge.

For languages, this aspect is somewhat neglected. Beginners' courses have more than courses for Advanced students, which is understandable to some extent.

4. DEGREE OF INDIVIDUALIZATION

This is an important point, as autonomy and individualization, although closely linked, are in fact two different notions. It is possible to have

- autonomy without individualized learning :
  when the learner works without a teacher the learning material is not necessarily adapted to his own specific needs (this is a very common case),
- a partially individualized learning situation without autonomy:
  this is the case of any class where the teacher takes the characteristics of his learners into account.

The situation is different in cases of what we have termed "autodidaxy" (total autonomy) and semi-autonomy. In the case of autodidaxy, the degree of individualization can be assessed by examining the pacing, correction, topics and tests.

In language learning materials, the overall degree of individualization is low. In fact, over two-thirds of the courses offer no possibilities for individualization, which, for autonomous work, is to be regretted. Moreover, very often one would only have to reorganize the structure and presentation of the courses, without making any fundamental changes to the general perspective or the content to make individualized work possible.

5. DEGREE OF ORIGINALITY

Although it is worthwhile attempting to assess this aspect, one must remember that the observations and judgements made on the question are necessarily highly subjective.

As a possible definition of originality, one could adopt what is not generally to be found for a particular group of learners in a particular learning situation. Thus one obtains a list of points which can be attributed (+) (originality of a positive kind), (-) (originality of a negative kind) or (?) (impossible to judge).

Examples:

(+) excellent presentation and lay-out (text in relation to drawings and photographs) accompanied by excellent visual presentation

or

humour in dialogues and voices

(-) continual literal translation

or

systematic use of an artificial or highly unnatural sort of language

(?) psychological help incorporated into the texts

or

continually changing tone in presentation of new items

For languages, most of the courses are lacking in originality both as regards aids and teaching help. With all the subjectivity that such an evaluation implies, it must be observed that less than 10% of the courses that were analysed were judged truly original by the analysts. However a greater degree of originality is often to be found as regards the detail. It is never entirely gratuitous on the part of the authors, even if some ideas do seem of rather doubtful value.

5. CORRELATIONS MADE BETWEEN FACTORS SELECTED

The factors selected are to be well defined and the most interesting of them to be correlated. Only six factors were considered for our study, namely,
COST, AIDS, TIME, LEARNING LOAD, GUIDELINES, SUITABILITY.
Perhaps others should be chosen for other learning situations.

As in the study, two types of correlations can be made. They concern:

. the connection between two factors for the whole corpus,

. the connection between one factor and all the others for part of the corpus.

Naturally the analysis must be weighted in function of the groups of learners or levels.

The results for languages are undoubtedly rather specific. However one can briefly say that there is some correlation between

. costs and aids, the majority of courses not being very expensive,

. costs and suitability. But a course which is well suited to autonomous work is not necessarily expensive, and there are examples of this in the corpus,

. time and learning load in about half of the cases,

. time, if it is average, and good guidelines,

. time, if it is average, and suitability,

. learning load, if it is average, and suitability.

On the other hand, there is no correlation, or very little, between:

- learning load and guidelines,
- suitability for autonomous work and aids, which is to be regretted.

6. ESTABLISHING A TYPOLOGY

It is necessary to define the factors involved in the learning process in order to make a classification of the courses into major types. The same factors as those used in the correlations were selected.

For what we have termed "autodidaxy" we obtain a table with these factors on the one side and the degrees on the other. Graphs can then be plotted and the different types defined. The aim is to classify the courses which is not always an easy task because of border-line cases.

This sort of table also enables an ideal course to be defined for a particular group of learners. Examples of such courses are to be found in the "Recommendations" which were formulated at the meeting in Madrid to discuss modern language learning.

7. IMPLEMENTATION OF SEMI-AUTONOMY AND AUTONOMOUS LEARNING SYSTEMS

The learning situations involved are those where the learner although carrying out part, if not all of the learning process in an autonomous fashion, nevertheless benefits from the help and support of an institution. In some cases both these facilities are substantial (e.g. some language centres in British or French universities, some big firms), in other cases the students only avail themselves of the help, as in the Beaubourg Centre in Paris where theoretically no advice is given. The two notions are different and indeed have very little in common with each other. Further examples can be added to the range of possibilities: community learning, Swedish study circles, study"médiathèques" with computerized access to data banks, etc.

In all cases, the following aspects must be examined, among others:

- material at student's disposal (material = equipment + teaching materials),
- financial and time-tabling conditions (possible restrictions),
- kind of learning instructions and psychological help for autonomous activities,
- degree of autonomy reached,
- degree of individualization reached,
- evaluation of the learning process.

It is difficult to be able to generalize by considering only modern languages

. because of the small number of situations examined,

. because of their diversity.

CONCLUSION

One can however (and this may serve as a provisional conclusion since the same phenomenon is to be found in the case of learning materials) distinguish two conflicting tendencies which correspond to two different philosophies of autonomous learning:

- in some systems it is not considered adequate to simply provide the material conditions for autonomous learning, and an effort is made to lay down the foundations for learning to learn in an autonomous fashion. Any sort of "mothering" which would keep the learner in a state of dependency is rigorously avoided and a serious attempt is made to encourage the learner to be responsible for his own learning process, even if this causes real difficulties,
- in other more "traditional" systems an attempt is made to facilitate autonomous work as much as possible and to gloss over all the difficulties that the learner is likely to meet

by giving him maximum help, both of the teaching and the psychological kind. The main idea is to make the student feel secure: whenever he feels like it he can call for assistance and be helped.

These two opposing approaches are in fact diametrically opposed poles:

- continual aid, or on the contrary encouragement to take responsibility for learning process,
- use of structures or refusal to use structures,
- dependency or independence,
- autonomy as an end, or autonomy as a means.

These are extreme positions and all sorts of intermediary ones lie between them.

However, these different conceptions are fundamental, and should be discussed in the follow-up to this meeting.

Appendix SUMMARY OF THE TECHNICAL CONSULTATION HELD IN MADRID (1978)*

Points of general interest

1 - In the field of autodidaxy, it would seem absolutely essential to carry out observations of the learners. Case studies are proposed so as to determine:

- why the learner has chosen a given course/subject, and not another one,
- his idea of what a course for autodidacts should be at the different stages of the learning process,
- how he works (where? when? how?).

This research should also deal with:

- ways of assisting the learning process (pacing, frequency, favourable moments; ideal length of a learning session).

2 - As far as "assisted autodidaxy" is concerned it seems necessary to:

- examine staff-learner relations (teachers, helpers, informants) chronologically during the learning process and the consequences which these have on the choice of teaching materials,
- ask the institutions about the results they have obtained (whether or not they have statistical data and data on the "attitudes" of the learners); try to find out whether they have changed their strategies and if so, why,
- assess to what extent - if at all - the institution allows for individualized methodologies implemented by the learner.

It would seem necessary to carry out a study aimed at finding out the activities that the learner can/should do either on his own or in the presence of the teacher. Existing studies and current experiments should be made use of to this effect.

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* See full report of this meeting in the UNESCO document ED - 79/WS/124 Technical consultation on the forms of autonomous and semi-autonomous learning of second languages (Madrid, September 21-22 1978) Summary (6p.) and Recommendations (11p.).

3 - More extensive research (i.e. not limited to "case studies") should be carried out with a view to establishing:

- certain statistical data on autodidacts (just how numerous are they? what proportion of them use courses, radio programmes, the press etc.),
- the motivations which cause the learner to learn in an autonomous fashion ("external" motivations; time, place, subject studied...; "internal" motivations: choice guided by psychological reasons or attitudes towards group work and/or attitude towards the learning process).

4 - It would be most useful to do research into the types of learners according to factors such as:

- specific needs,
- learners with or without secondary education; senior citizens... ;
- desire for short term/long term results.

5 - Recommendations for all types of autodidactic learning.

- need for materials specially suited to autonomous work,
- practical instructions on what can be achieved with the course in an ideal learning situation,
- learning material of convenient size and which are easy to handle,
- materials designed in such a way as not to destroy the initial motivation,
- good printing and attractive presentation,
- precise instructions aimed at helping the learner to take charge of his learning process and to carry on with the work he has undertaken in a useful way,

- detailed guide of how to use the available resources (instructions, order in which activities are to be carried out, pacing etc...),
- possibility of self-evaluation,
- maximum degree of individualization within the materials (pacing, methodology, correction) with orientation tests at the beginning and possibly throughout the learning process.

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SELF-EVALUATION IN LEARNING

A Report on Trends, Experiences and Research Findings

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1. INTRODUCTION

1.1 Purpose of the report

The purpose of this study is to analyze documents which deal with the self-evaluation of learning. It will survey and review different methods of self-evaluation used to date in different educational systems and contexts. This review is an outflow of a larger research project which was commissioned by the UNESCO Secretariat. The aim of this research project is to analyze forms of autonomous learning. Autonomous learning is defined as "learning carried out in the absence of a teacher" which might be either totally autonomous without any institutional frame work (autodidaxy) or in a partially autonomous fashion (semi-autonomy). Although the original project dealt with foreign language learning only and centered on the age-groups of older teenagers and adults, these restrictions do not pertain to the present review which will deal with the problem of self-evaluation from preschool up to adult learning.

1.2 Procedures and scope of the report

The literature search, which aimed at identifying documents, books and journal articles dealing with self-evaluation of learning, utilized computerized and manual procedures.

The use of the computerized catalogue of the Bielefeld university library helped only to identify a relatively small number of studies since it indexes and stores only the titles of books and monographs which contain the proper key-word. Hence a manual search was made of all those library shelf groups which fall into the categories of "evaluation and measurement" , "assessment and examination", and "adult learning and teaching".

A further manual search was made of British, American, and German educational journals and periodicals and of relevant educational indices of the last decade from 1970 onwards.

Additional mail and telephone inquiries were addressed to developmental and research experts in educational institutions, which specialize in the field of autonomous learning, i.e. the Open University in Great Britain, the Fernuniversität Hagen and the Deutsches Institut für Fernstudien (German institute for distance studies) in Germany. These experts were asked if they had any information about research studies, plans or reports of practical experience that might be relevant to the purpose of the review.

1.3 Structure of the report

Because of the results of this search, which contrary to expectations revealed only a disappointingly small number of reports and studies relevant to the purpose, it seems appropriate to start with some more general considerations centering on purposes of assessment, justification of self-evaluation and the qualifications of assessors. The next chapter will describe practical approaches to self-evaluation in different educational surroundings and different methodological contexts. The fourth chapter, then, will report and review the results of research studies.

2. GENERAL CONSIDERATIONS

Although it seems to be a trend (not to use the word "fashion") nowadays to mention the terms "self-evaluation" , "self-control" or "self-assessment" in educational books and articles, one gets in most cases a vague statement only, often casually in one aside, that self-evaluation is an important feature in recent educational thinking, or that self-assessment exercises are included in the instructional material developped or used in a special educational system. And this is one of the findings of this review: It is common practice today to include self-evaluation opportunities, often called self-tests, in instructional materials at all levels and in all subject matter areas - it is indeed hard to find materials which are free from any exercises, questions or other suggestions for individual work, but there is no equivalent research to date as to the effects or effectiveness of such self-assessment opportunities. In spite of the long list of bibliographical the rather general level just mentioned.

This aspect of self-control in the sense of behavioural therapy is - at least in my opinion - not central to the intentions of the UNESCO project. Considering the problems of autonomous learning the main question here is whether and by which means a learner can evaluate his own progress in subject matter-centered learning in order to take the appropriate decisions on what to do next - to take some remedial steps or to proceed to the next task. For this aspect this review uses the terms "self-evaluation" and " self-assessment" and avoids the misleading term "self-control".

Self-evaluation is not an all-or-nothing quality. External evaluation and self-evaluation are not mutually exclusive alternatives - in most instructional situations components of both types will be blended. Hence it is important to define which features of the learning process are self- and which are externally evaluated, in order to identify the particular problems involved. For the purpose of this study the main degrees of self-evaluation in learning can be defined as follows:

(1) The learner is free to evaluate his own progress and to decide when he is ready to take an externally administered and marked test. This feature of self-pacing is one of the basic principles of the method known as the Keller plan and of other types of Modular Instruction (Boud/Bridge/Willoughby 1975; Goldschmid/Goldschmid 1973). Although not self-assessment in a strict sense of the word it is an approvement of the traditional method of the teacher-fixed date of each assessment or examination. In most cases, in which "independent study" is stressed as a promising development, independence refers only to the time and sometimes the ways of information-gathering and problem-solving, but not to assessing one's results.
Achievementis measured by traditional examination methods and assessed by an external assessor, which is in most cases the teacher or the tutor.

(2) The learner can make his own evaluation whether he has

references appended to this review it has not been possible to identify a report focusing on practical experiences in the field of self-assessment of learners, and the existing relevant empirical studies are almost a negligible quantity. This apparent contradiction is at least partly due to differences in terminology and definition.

2.1 Some aspects of self-evaluation

The investigations, for example, of all contributions to a book with the promising title Self-controlled Learning (Neber et al. 1978) revealed that under this heading the authors deal with different aspects of learner-participation in the instructional process, in particular in the planning and implementation of instruction. One or two, however, just mention self-assessment or self-evaluation in passing, and the only one which focuses on self-evaluation deals mainly with questions of behavioural self-control. And this is another finding during the work on this review:The majority of books and articles which use the terms "self-evaluation" or "self-control" in their title come from authors and researchers of the psychological, in particular the psychotherapeutic field. They deal with the forming of the self, with the question, how and in which ways individuals develop evaluations of self, how these processes can be influenced, and how, in particular, undesired behaviour can be changed (e.g., Förster/Wewetzer 1973; Goldfried/Merbaum 1973; Hartig 1973; Mahoney/Thoresen 1974; Perlwitz 1978; Watson/ Tharp 1972; Webster/ Sobieszek 1974). It is the question, however, whether one can directly apply findings from the field of behavioural self-control to the problem of self-evaluation of learning. Some hints to that effect are given by Perlwitz (1978), who suggests that the teacher has to make success possible for each learner in order to allow the student to avoid and escape any negative self-evaluation. The main objective of his book and that of other authors who are concerned with self-control in learning and teaching is to prepare teachers for learner-centered individualized instruction by means of a marked psychotherapeutic approach. If they give any recommendations,however, these remain on

reached mastery of a learning unit (often by passing a self-administered test) in order to proceed to the next assignment.

(3)The learner gives himself a rating or marking for his achievement, either in relation to a fixed standard or in relation to other learners.

(4)While the self-evaluation activities described as stages 1.,2.,3. usually take place within an institutional framework, which may be sometimes very loose and flexible, and with instructional materials which are prescibed or at least made available by some external institution (educational system, publishing house etc.), there is, of course, the totally autonomous learner. He or she seeks no formal recognition of achievement by any institution and is therefore in full control of all components and steps of his or her learning process from stating the objectives, planning the necessary steps of learning to finally assessing the outcome.

As with other educational decisions, here also one has to distinguish that which is educationally desirable from what is technically feasible. The reasons against a totally external determination of a learner are self-evident in a democratic society, but there are also dangers in the other extreme of allowing each individual learner to independently plan and evaluate his learning, since then the kind and standard of knowledge, skills, and abilities which the learners achieve are left to chance. The aim of learning is twofold: on the one hand to develop the capability of independent and responsible information-gathering and problem-solving in different fields, and on the other hand to acquire a meaningful set of knowledge, which is at least partly determined by common consent of the society one is living in. Hence one has to very carefully describe the appropriate proportions of external structuring of the conditions of learning and of the freedom of decision and the degree of self-evaluation of the individual learner.

The degree of self-evaluation depends on the preceding learning experiences and capabilities, in particular the self-management skills of the individual learner. A number of studies have shown that it is necessary to carefully develop these skills (Bandura 1969; McLaughlin 1976). It appears to be necessary for a student to begin with a learning situation in which the important components are externally pre-structured. The structural help and guidance is to be gradually reduced to lead to a situation where the learner himself is able to organize the external conditions of his learning and to evaluate his own achievement. Even with respect to adult learners experiences at the Open University have shown "that without some form of preceding structured learning, students will not have developped the necessary skills for self-organized project work" (Bates/Pugh 1975).

2.2 Purposes of evaluation and qualification of evaluators

Informal self-evaluation - although hardly often consciously performed - is a basic and constant component of all intentional human activities. Educators, however, are not content just to formally acknowledge the importance of this factor for the educational situation. A number of special reasons are given why self-evaluation is in particular desirable for learners:

- A main reason is of an ideological or philosophical nature. Here the ideal aim of education is the self-directed individual, capable of independent and responsible activity. An important feature in this development is the ability for realistic self-assessment.
- From the field of learning psychology and learning theory stems the argument that training in self-evaluation results in long term maintenance of effects which is important for life-long learning.
- Another assumption is that in the long run self-evaluation will be cheaper than traditional evaluation procedures by external assessors.
- Finally, in some special cases, e. g. distance study or independent (autodidactic) learning outside of institutional frame works, external evaluation is difficult or even impossible.

Inspite of the generally acknowledged relevance of self-evaluation in learning it has been stated that our traditional educational system is not adapted to really allow self-evaluation, in particular, that "the climate of formal evaluation is often so threatening as virtually to close out honest self-appraisal" (Wilhelms 1967, p.10). This sceptical argument suggests that it is necessary to view the feasibility and chances of self-evaluation, in particular if its use is to be socially accepted, in the wider context of the function of evaluation of learning in general. The two main functions of student assessment may be defined as judgemental, competetive, grading, or summative on the one hand and as developmental, diagnostic, or formative on the other. A confusion of these functions may lead to particular problems. As Rowntree (1977) has pointed out, these mentioned functions of assessment, however, are not ends in themselves, but serve further purposes, the most important of which are the following:

- Evaluation for selection for further educational opportunities and career, for entry to the university and the professions. This purpose is probably what most people have in mind when they talk about learner evaluation or assessment.
- Evaluation for encouraging the student to learn. As to the motivating effect of knowing that you are assessed, it is sometimes hard to decide the line between encouragement and coercion. Hence this function has been called the "stick-and-carrot" concept of evaluation.
- Evaluation for feed-back. Here the aim is to identify learning difficulties and strengths of the student as a basis of further instructional decisions. While the first two purposes are very often served by non-specific grading or ranking methods, these are virtually useless for a feed-back function. What is needed here is specific diagnostic information.

Although most authors acknowledge that the feed-back function, which is in the main diagnostic, may be served by student self-evaluation, this is not without problems, since by definition evaluation is not descriptive only but always contains the evaluator's judgement of the work as good or bad, as correct or incorrect. The ensuing difficulties have been defined by Drearden (1979, p. 119):

> "Self-assessment will be simplest where a straight forward comparison in terms of identity is possible between what has been done and the correct answer, as in mechanical

> 'objective' tests. With sophisticated capacities and their complex and individual products, such as essays, the possibilities of self-assessment in learning are much more limited since comparison in terms of identity is not possible and skilled judgement is needed. 'Model answers' may have some pedagogic uses here but cannot suffice if justice is to be done to an individual and non-standard product."

Difficulties become even more basic and fundamental when assessment has to result in grading. Even authors and teachers who support the idea of self-evaluation in diagnostic learning situations are usually reluctant to encourage its use in summative student grading. As long as career and prestige depend on evaluation results and as long as there is competition between applicants, they will concede a participation of the learner in the measurement procedure, but see no chance for an objective and honest self-appraisal.

The last two paragraphs with their description of basic problems involved in self-evaluation point to the two main qualifications which are usually identified as necessary for a good assessor:
- Since at the heart of each evaluation of learning is the identification of the learner's level of competence, the first characteristic of an assessor is subject matter expertise which also includes expertise in selecting and applying in each case the appropriate evaluation techniques.
- The other qualification of an assessor is his objectivity. He should be unbiased in judging the evidence without prejudice and personal preference.

In a very detailed analysis of assessment functions, potential assessors, and essential assessor characteristics, Whitaker (1976) comes to the conclusion that out of the number of potential assessors in traditional class-room learning as well as in different forms of open experiential learning the only well-qualified evaluator is the teacher or tutor. As to the question of self-evaluation he summarizes his point of view:

> "Of all the potential assessors we have identified, only participant observers (in this case other students in the class) rate lower than student learners. The major weaknesses of the student as assessor are bias and lack of expertise - both in subject matter and in the assessment process. Bias is a significant factor when the pur-

> pose of assessment is competitive, such as assignment of grades or credits. It may, however, actually be helpful when the purpose is diagnostic or developmental. Lack of subject matter expertise is an unavoidable weakness for self-assessment since student status itself is grounded in the assumption of significant need for learning."

While some authors who share this negative judgement come to the conclusion that it is necessary to exclude the student from the assessment of his own learning (e. g. Dumke 1977), Whitaker recognizes the importance of self-evaluation:

> "Still it is possible, particularly for advanced students, to know enough about the specific outlines of their educational needs to be able to recognize progress clearly enough to make accurate assessments. Some fields of studies provide prerequisite training, which helps to surmount the problem of subject matter deficiency ... In addition, there are important formative reasons to train students in assessment techniques. Competence is, in fact, often defined to include an evaluative component. Thus it is not enough for students simply to acquire knowledge, or even to acquire and to be able to apply it; competence also includes the habit and the ability to judge the result of knowledge applied in a particular situation. While evaluation does not mean precisely the same thing in this context as it does in the assessment process, the essential intellectual skills are similar ... There is more than ample evidence that both learning and assessment could be improved significantly if greater attention were given to training students in various aspects of the measurement and evaluation of their educational progress" (p. 2o8 f.).

This is, of course, in particular true of learners in the field of post-secondary and experiential education.

Self-evaluation thus turns out to involve two problems. The first is a more cognitive one, whether the learner can in principle be conceded the competence, the intellectual ability to make a realistic evaluation of his own learning. Even if this question can be answered in the affirmative there remains a moral or ethical problem: Considering the consequences of evaluation in a competitive situation, can the learner be expected to apply this evaluative ability and to honestly reveal the results of his own assessment ?

This distinction together with the different functions, which evaluation may serve in learning, should be borne in mind during the following chapter, which considers more practical 81 problems of the applicability of self-evaluation in different frame works.

3. EXPERIENCES, PROCEDURES, SUGGESTIONS

Before we take a closer look into the different fields where self-evaluation is used or at least its use discussed, one general and basic feature shall be indicated. In my search for practical instances of self-evaluation the most striking discovery was that almost all books which in the widest sense of the term may be called instructional or self-instructional contain some kind of self-assessment component. In most cases each chapter, often called "unit", is followed by questions, excercises, or by a self-diagnostic test. If the reader can pass this test - and it is his own personal decision whether he does so or not - he is directed to the next chapter.
Even if the self-assessment excercises sometimes take a more elaborate form, they are only a variation developped from this basic model. The use of self-assessment methods in books, however, is just an indication of a more general characteristic: The possibilities of applying self-evaluative procedures are to a high degree dependent on the availability of material resources or, to use a more recent term, of media. As long as learning is based mainly on the presence of personal instructors, it will be the function of these persons to evaluate the learning progress and the achievement of "their" learners.

In the first part of this chapter I will examine what has been reported on and suggested for the application of self-evaluation in different educational context from early schooling to adult learning and distance education. A second part will deal with selected procedures (forms of programmed instruction; contingency contracting; project method) which seem to be apt to further the dissemination of self-evaluation. The categories used to distinguish the different domains are not mutually exclusive, they are just to label in each case the primary orientation for convenience of presentation. Furthermore as already mentioned above, the reader should be warned that it was not possible to draw on any report focusing on the topic and that the present survey can only be an effort to carry together the scattered statements, hints, and suggestions.

3. 1 Formal schooling

With respect to primary and secondary education one may look upon the first two decades of our century as a most prolific period of emergence of educational methods and systems which embodied self-evaluation as an essential component. As the most important and influential contributions one may regard the Montessori method, the Winnetka and the Dalton plan, and the German reform movement in education.

The ideas and methods, which Maria Montessori developped, refer to the education of very young learners in the field of preschool and elementary education. The basic principle of her approach is the recognition of the individuality of the learner and accordingly the support of a free and individual development of learning activities. This principle pervades not only the personal relations between the learner and teacher or the psychological climate of the instructional situation, but it determines the preparation and arrangement of an appropriate learning environment. Based on the methods and materials of the French educator Seguin she developped learning materials, which are designed to support the individual learning activity and which, in particular, are self-corrective if possible. Hence a learner in working with these so-called Montessori materials will automatically discover whether he or she has made any mistakes. This self-evaluative feature of the material, which cannot be circumvented even by a clever learner, keeps the learning process going on a trial-and-error basis without the intervention of the teacher being necessary. A typical sample of this kind of self-corrective material consists of three wooden blocks, each with ten holes of different diameters, and ten cylinders which exactly fit the hole. A learner cannot put one of the cylinders into a wrong hole without having a cylinder left in the end. The learner thus automatically discovers his error and needs no external assessor. Saettler (1968) considers these Montessori devices as probably the first "teaching machines ".

Both Washburne's Winnetka plan and Parkhurst's Dalton plan are based on similar ideas of guided self-activity of the learner.

Although both plans provide for self-instructional materials, which sometimes include possibilities of self-correction, evaluation in the main is the function of the teacher. The learner is in control only of the time and organisation of his work. When he thinks that he has mastered his assignment, he can take a self-administered test to see whether he is ready for formal assessment by the teacher.

The so-called German reform movement in education, which dominated the first two decades of the twentieth century and the main exponents of which were Kerschensteiner and Gaudig, was greatly influenced by the concepts described in the preceding paragraphs. Kerschensteiner and Gaudig developped the educational conception of a "working school" the basic characteristic of which is the independence of the learner in the exhibition of knowledge and his autonomy in starting on and in completing an assignment. Hence an essential feature of this method is the possibility for the learner to self-evaluate his learning process, or better his working process, and its results. As always, one of the main problems is to develop and teach self-assessment techniques which are reliable and which the learner himself can easily apply whenever an evaluation is required in the course of his self-controlled learning. The less standardized the intended learner behavior is, the more difficult is the design of reliable self-assessment procedures. As it has not been possible to date to solve this problem in a satisfying manner, the teacher is often compelled to engage in the evaluation of the learning process.

The recognition of these difficulties has resulted in the development of methods and the establishment of projects which replace total self-assessment by a participation of the learner in the evaluation process in co-operation with his peers and his teachers. In most cases this leads to a distinction between what Whitaker (1976) has called primary and secondary assessors. While primary assessors are qualified to conduct the evaluation, the role of the secondary assessors is restricted to provide additional information for the use of the primary assessors. Such a project, which

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keyed into these" (p. 65).

The purpose of these self-tests was not to grade students, but to give them knowledge of how they stood in relation to the course. As in most other cases, however, there is no detailed description of the self-assessment instruments, and there was no formal investigation into the effectiveness of these tests. The only conclusion which could be drawn from questioning the students was that "most students did find the self-tests useful" (p. 87).

3.2 Adult learning

With respect to self-evaluation, adult education seems to be a field of conflicting tendency. On the one hand, it has been stated times and again that one of the crucial assumptions about the characteristics of adult learners as compared to child learners is the self-concept of being a self-directing human being:

> "Adults tend to resist learning under conditions that are incongruent with their self-concept as autonomous individuals. ... Probably the crowning instance of incongruity between traditional educational practice and the adult's self-concept of self-directivity is the act of a teacher giving a grade to a student" (Knowles 1976, p. 4o and 43).

Huberman in his study on permanent education points out,

> "that one of the main advantages of working with adults, as compared to children, is that they are capable of self-evaluation - they are able to provide a reasonably objective and accurate estimate of their own progress and performance " (1974, p. 72).

On the other hand, however, the same author has to admit, "that adults seem to prefer highly traditional, academic settings" (Huberman, 1974, p. 53). Even more than that :

> "when adult students are first exposed to a learning environment in which they are treated with respect, are involved in mutual inquiry with the teacher, and are given responsibility for their own learning, the initial reaction is usually one of shock and disorganisation. Adults particularly are not prepared for self-directed learning" (Knowles 1976, p. 4o)

There are two explanations for the tendency mentioned last. On the one hand it is the remembrance of their experience as child learners, which lets them prefer the type of instruction was set up for learners in their last two years at a modern secondary school, has been described by Knof (1976). In this experiment, the aim of which is to develop a more general ability and willingness for responsible evaluation and decision-taking, all learners are allowed on one day each week to select a topic or learning unit from a kind of catalogue. The learner then can work independently or together with some peers on his assignment. Each of these days closes with a "teacher-pupil conference". Formal members of these conferences are two pupils (they change every week) and the respective subject teacher. Each learner, however, has a right to participate and to join in the discussion. One of the main functions of such a conference is the decision on questions of assessment. In particular, each participant has to give his opinion on the weighing of test-items (tests are the common assessment instruments) and their relevance for the final rating. This involves a discussion of the degrees of difficulty, the time allowed and other special factors which may influence the achievement of the learner. Knof makes mention of a general improvement of performance, a higher quality of learner contributions, and an increased willingness to critical evaluation. His description, however, includes no further details of these effects.

Quite naturally, a learner is regarded more mature and hence capable of responsible decisions when he gets older. Thus Hills can summarize his analysis of recent statements on the purpose and aims of higher education as follows:

> "it clearly indicates the change from a largely teacher-based process to one where the student actively takes responsibility for his own progress, that is. progress towards becoming a self-directed individual" (1976, p.1o).

Some of the methods and approaches, which flow from this change, will be described in more detail under a method-oriented heading later in this chapter. Hills himself reports the design and implementation of an experimental self-teaching system for a first year undergraduate course on electricity at the university of Surrey. Of particular interest for this review is his statement :

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> "Perhaps the most important feature of the approach was the self-tests. Since these were designed to give the student his direction - all the resource materials were

they were used to and they could cope with at earlier stages. What is needed here for the adult, is a general process of re-orientation towards their status as learners. They have to learn not to fall back onto their previous experiences when they were young, and not to accept the dependence on the teacher as a law of nature, but to apply their evaluative abilities which they admittedly possess. Hence Knowles suggests to think less in terms of the evaluation of learning and more in terms of the re-diagnosis of learning needs. On the other hand, most adults have developped a self-concept which often forbids to frankly admit weaknesses. Hence they feel vulnerable when they have to expose what they can or cannot do in front of others. In order to overcome this reserve, it has been suggested to use programmed text books and other structured learningsituations which allow for self-assessment without the risk of 'making a fool of oneself'.

As opposed to formal schooling, which as a rule refers to younger learner, the problem of self-evaluation in adult learning is, in the main, not one of a missing cognitive capability for realistic self-evaluation, but a reluctance, not to say fear, of openly applying this ability. Hence the instructional implication is not in the first place to develop such a self-evaluative capability (although this, of course, may also be necessary to a certain degree) but to design learning situations and materials which permit self-evaluation without the restrictions mentioned.

3.3 Distance education

In the introduction to this chapter it has been pointed out that there is a strong connexion between the availability of material learning resources and the opportunities for self-evaluation. Accordingly self-assessment is stressed as an important feature of modern media-based teaching-learning systems, e.g. the Open University, the Fernuniversität Hagen, or most of the projects described in Multi-media systems in adult education (1971). As a rule, of course, the course materials of all distance education systems - no matter whether they are publicly or privately organized - include assignments which have to be submitted to the institution for assessment and marking by tutor or computer and which count towards the final degree. In addition to this traditional method of external assessment, however, the possibility of self-evaluation seems to be a fundamental and prominent characteristic in distance education. Thus Bates/Pugh state for the Open University:

> "into the correspondence texts are built self-assessment questions and activities, to make the student himself do some of the thinking, and to evaluate his own progress through the unit (the answers being given elsewhere in the text). These activities are not confined to the text alone. We have been trying to encourage course teams to write broadcast notes in such a way that students are asked to carry out activities following a program, or to try and answer certain questions from their watching or listening" (1975,pp.52f.).

In describing its teaching-learning system to potential students, the information brochure of the Fernuniversität explains:

> "Apart from assignments to be submitted for external assessment, the study materials include self-tests to aid the distance students in evaluating their own level of achievement. They are in important element of distance education: In the process of self-organized learning, which is guided by media but leaves the scheduling to the student, self-tests are indispensable, since they are instrumental in developping the qualification of scientific thinking" (1978, p. 28).

Despite this general agreement on the importance of self-assessment in distance education and despite the common practice of including such excercises in the learning materials, little else could be found. It is frequently mentioned that the self-assessment activities in the course units represent a technique which has been adopted from programmed instruction; this reference, however, is always made in one sentence only without further details (Bates/Pugh 1975, p. 52; Haagmann 197o, p. 49; Sommer 1972, p. 49). In their description of different types of excercises in correspondence texts, Grüning/Heidt et al. explain:

> "Most assignments are designed in such a way that the student can evaluate the result of his learning either by using the literature mentioned, by repeating the preceding chapter or by working through the following chapter. In some cases the solutions or the suggestions for solutions are given at the end of the same course unit or in the following one" (1972, pp. 1o f.).

Although they distinguish with reference to Bloom's taxonomy of educational objectives the categories of recall of information, comprehension, application,and evaluation excercises with an example each, they have to admit:

> "It is not possible to make any statements about the effectivity of the different types and categories of excercises, since there are no valid empirical investigations. As it was deliberately left to the participants to submit their assignments or to comment on them, there are not even enough data for a systematic analysis" (p. 16).

Melton in his paper on Assessment Procedures Used in Distance Teaching does not even mention with a single word the topic of self-evaluation. Since I could not believe that my failure to detect relevant documentary evidence represented a true picture of the field I addressed telephone inquiries to experts in the following institutions:

- The student assessment research group at the Institute of Educational Technology of the Open University,
- The Center for Development (ZfE), the central institute for distance education research (ZiFF), and the faculty of education of the Fernuniversität Hagen, and
- the research group of the German institute for distance studies (DIFF).

They all confirmed the relevance of self-evaluation for distance education, but told me in each case that their institution neither had been nor is at the present time involved in any formal investigation, analysis, or even systematic gathering of information concerning the form, functions, or effects of self-evaluation.

One of the reasons of this disappointing finding may be the different functions assigned to the different types of evaluation in distance education. The only thing which really counts in the end is the assignment which the student submits to the institution and which is evaluated and marked by an external authority, either the tutor or the computer. The function of self-assessment excercises, the effectiveness of which is commonly assumed and taken for granted but to which no serious thinking has yet been devoted, is just to provide a take-it-or-leave-it opportunity for the learner to excercise the abilities and skills he has to develop.

3. 4 Teacher training

Self-evaluation seems to be generally and internationally accepted as a feasible tool in a special method of teacher training, which usually comes under the heading of " micro-teaching" or "mini-course" (Borg 1970; Brown 1975; McAleese/ Unwin 1971). Although slightly differing models have been put forth, basically they all try to improve the instructional skills of the teacher in the same way. First, the teacher has to prepare a short lesson, as a rule centering on one or just a few well-defined teaching skills. His presentation of this lesson to his class or a smaller group of students is recorded on video tape. Afterwards the teacher replays the video tape and analyses and evaluates his own performance using a self-evaluation form or check list. These steps are often followed by a revision and re-teaching of his lesson which again is video-taped and self-evaluated in the same way.

Reports on the effectiveness of this approach suggest not only the equivalence but a superiority to conventional teacher training methods - without, however, usually focusing on the role and contribution of the self-evaluation component. Again it should be noted that the result of self-evaluation here does not contribute to grading nor is it used to inform a superior about the teaching standards of the individual teacher. Its sole purpose is to give feed-back to the learner, which in this case is the teacher. Jensen (1968) regards this feature, i. e. self-evaluation for self-improvement only, as a main reason for the success of this approach. He set up an experiment in which video-taped regular lessons were used for self-observation and self-evaluation by the teacher. Each teacher has the full control of the use of the video tape; apart from the research group nobody could see the tapes without written permission from the teacher involved. The fact that their performance and evaluation was not for administrative use by such persons as principals and superintendents had a positive effect:

> "Since the teachers were the only ones to evaluate their teaching, they were anxious to see how well they really could teach, yet this attitude did not

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> prevent them from being personally and professionally honest. They found fault with their best teaching. Significantly enough, this served to be an encouragement rather than a discouragement" (p. 22).

From his project Jensen then concludes that

> "although lack of external criteria makes this procedure unsuitable for merit rating purposes or for comparison of one instructor with another, the method has promise for the individual teacher's self-improvement activities" (pp. 66 f.).

3. 5 Language learning

What has been said so far on the use of self-evaluation methods in different educational situations and fields applies, of course, also to the special subject area of foreign language learning. Thus a critical analysis of foreign language materials carried out in behalf of the UNESCO project indicates some features concerning self-evaluation, which are in accordance with findings from other sources reported in the present survey:

- The majority of courses under investigation in this analysis have some kind of self-assessment and self-correction component.
- A second point refers to a more attitudinal problem: The materials and the contexts in which they are used expect the learner to accept responsibility for his own learning process and at least to participate in its evaluation.
- The analysis stresses the difficulties in providing model answers for more complex and creative excercises. Several solutions are suggested to overcome this problem:

(1) The model answer consists of a "medium" response which might be given by a native speaker.

(2) The solution states the different elements and components which should be included in a correct answer. This way is also chosen by a method known as "Structural Communication".

(3) Although for exercises of the "closed type", where only one response is possible, the learner may be given the full opportunity of self-evaluation, the open-ended type of exercise requires a kind of semi-autonomy for correction, i. e. a cooperation of learner and teacher.

(4) Autonomy in self-testing may be enhanced by the use of computer terminals which are a distinguishing feature of all kinds

of computer-managed instruction.
The suggestions mentioned under point (2) and (4) point to methods which will be described in the following paragraphs of this chapter.

There is, however, another special method which is worth mentioning in connexion with self-evaluation in foreign language learning, and that is the AAC system (audio active comparative) used in language laboratories. This system generally uses a four-track audio tape recorder. The master phrase, which is spoken by the teacher, is on track 1. The learner records his pronunciation on track 3, compares it with the master recording and may try again. In order to make this comparison, he can play back track 1and 3 simultaneously. He can, however, only record, erase and re-record on track 3. Thus he is able to practice a particular pronunciation as often as he needs to, using the same master. Some authors, however, have warned against relying solely on self-evaluation in using an AAC system:

> "It is anillusion to think that just providing the learner with a correct answer for comparison will lead to a correct repetition in pronouncing it. When the exercise is not just of the psychomotoric mechanical type, many pupils have difficulties in repeating the correct answer,in particular when they do not understand the application of the linguistic structure in question" (Schiffler 1976, p.98).

As obviously the learner at this stage is not a competent judge of his pronunciation efforts it has been suggested to fall back on semi-autonomous methods. When the teacher realizes that the attempts ofthe learner cannot be regarded as sufficient, he should take over, point out the error and correct. the learner which in a language laboratory is possible without disturbing the whole class. This argument leads to the conclusion that self-evaluation in the field of pronunciation training is quite problematic and that again the co-operation of learner and teacher is more advisable (Romiszowski 1976).

3. 6 Programmed Instruction and its derivatives

Many authors in quite different fields and institutions of education point to the principle of and the experiences with "programmed instruction" as the main source of self-evaluation procedures. Since by now the main types of programmes and the close connexion of this approach with behaviourist learning theories can be regarded as generally known, there is no need to go into detailed description. Instead I will focus only on what is relevant with respect to assessment methods in programmed learning. In a typical programme the information to be learned is broken up into small chunks (stimulus.), each of which requires a response from the learner who, then, immediately is informed whether his answer or reaction has been correct or not (reinforcement). This combination of response and immediate reinforcement is an essential characteristic of self-evaluation in programmed instruction. Apart from actively involving the learner in practicing the task, the function of the response it to provide a measure of the learner's progress. Since learning programmes are designed for individual use without continuous intervention by a teacher or instructor, the student must be enabled to judge the correctness of his response on his own. This problem is solved in different ways in the two main types of programmes:

- A linear programme presents a large number of small frames which have to be studied in a fixed sequence by all learners. Exercises and questions are designed in such a way that only one correct answer is possible. Immediately after the learner has given his response he is presented with the correct one. If there is a discrepency the learner has to re-read the preceding frame and to try again before he is allowed to proceed to the next frame. If the student's response and the model answer are identical he can take this step straight away.
- In a branching programme the student has several alternatives of responding. He either makes a response and compares it with the alternatives given, or he just choses a correct response from a given selection. If his choice is correct, he goes on to the next frame. If his response is wrong, he is given additional information (" remedial loop") before he is allowed to go on.

Despite of the obvious difference the basic feature of these continuous self-assessment procedures is the same:

At more or less regular intervals the programme demands a response from the learner who, then, himself checks this response against a given model answer to see whether his own solution is correct or not. In neither case this involves an independent problem-or subject matter oriented evaluation process of the learner. He only has to compare his solution with the one given as correct and then to accept the verdict - even if he does not agree, which happens the more often, the more complex the subject matter becomes.

Because of the heavy critique wielded against programmed instruction in general and against some characteristics of the two types just mentioned, a number of improvements have been suggested and tried out in practice. The following paragraph will describe two examples, which mark two main directions of development. The first concerns the use of computers, and the second a technique called "Structural Communication".

Apart from using computers in the administration of education, there are two basic methods of applying it as an instructional medium. The first method is called computer-assisted instruction (CAI) and the second wears the label computer-managed instruction (CMI).

- In CAI the computer takes over the role of the text book, which has always been the most common medium in programmed instruction. The computer presents the frames, and the learner has to use the terminal to give his answer. Although more sophisticated types of equipment have been deviced, the learner usually types his answer into a keyboard type of terminal. The computer, then, prints out the reinforcing comment. Because of the high speed with which a computer can process and handle an enormous amount of different information, it can accept and assess as correct more than just one wording of the learner's response and also give additional comments. This reaction may sometimes give the impression of an almost personal tutorial system. Apart from the faster processing of more data, there is no essential difference to the programmes described above.

- While CAI has to be regarded as a quantitative improvement only, CMI takes a different approach. Here the computer controls the learner's way through the subject matter area and gives directions concerning the student's progression from one unit to another. In his contribution Student initiated testing (1974) Allen describes the application of a CMI programme to courses in introductional biology, child development, and industrial education instruction at Ohio State University. With respect to the role which self-evaluation plays in this system he explains:

> "Its function is to provide meaningful testing to guide the students in their use of such learning resources as books, films, laboratories, and conferences with instructors. It must be emphasized that tests are generated for student guidance and not for performance grading. Tests are given in a 'no risk' situation in that they may be taken as often as results are useful and often as is needed for the achievement of mastery" (p. 294).

Apart from the restriction that only questions which are directly related to behavioural objectives can be used within this system, he reports no further details but gives a positive appraisal of the approach in general.

Although by its inventors still regarded as a new programmed teaching method or technique, "Structural Communication" heralds a qualitative improvement, the principles of which are drawn among others from structuralism, field and Gestalt theory. Structural Communication tries to avoid the monotony common to so many learning programmes and to develop a system capable of evaluating the learner's understanding, i. e. "the ability to use knowledge appropriately in different contexts and to organize knowledge elements in accordance with specified organizing principles"(Kegan 1972, p. 66), and not just his ability of recall. Hence, quite appropriately, an article promulgating this approach was entitled " Beyondlinear and branching programmed instruction" (Kegan 1974). The basic element in Structural Communication is the study unit, usually a text between 1o and 2o pages, divided into 6 parts with the following functions:

- (1) Intention: This part describes the objectives of the unit, its context and connexion to related topics.
- (2) Presentation : This self-descriptive part presents the

subject matter information of the study unit. Either it contains the information itself in a written form or it directs the student to other relevant materials or activities.

- (3) Investigation : This section usually contains three to five problems concerning the subject matter of the presentation. They are carefully co-ordinated together with the next part.
- (4) Response indicator: This is a matrix of information elements which in their entirety cover the content of the presentation in a summarized but randomized form. Usually there are between twelve and thirty items. The learner now has to put together those elements which are relevant for each problem, thus constructing a solution. The same element can be part of different problem solutions and may have a different function in each. This matrix is the basic vocabulary for the communication of learner and author. The number of possible responses is much higher than in the usual multiple choice test, and the matrix permits the construction of simple as well as of rather complex responses.
- (5) Discussion: A first part (discussion guide) checks which of the items the learner has included or omitted from his answer and accordingly directs him to different comments of the second part (discussion comment), e.g. "If you omitted items (2) and (6) from your response to problem (1), then read comment A", or "If you included item (2), (4), (12) in your response for problem (2),then read comment K". By designing an appropriate number of comments for each problem, the author can deal precisely with different responses of different learner, he can explain the relevance of the different items for the problem in hand and, if necessary, direct the student to the "Presentation" or to further materials.
- (6) Viewpoints: In this section the authors may present a general comment on the topic, explain their own bias or point of view or describe other viewpoints on the theme.

In order to better illustrate in particular the key features of Structural Communication (which in my view are parts (3) and (4)), some examples from different subject matter areas are given in the appendix to this report.

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Concerning the evaluation procedure, two characteristics stand out in Structural Communication:

- Out of the recognition that each subject matter area can be coherently structured in various ways, which all may be regarded as correct, the system allows the learner a considerable freedom and flexibility in the construction of his responses. As he makes up his answer to each problem by selecting and combining as many items from the carefully structured matrix as he thinks relevant, the network of relationships will emerge which represents a structure of the subject matter area under investigation:

> "Each problem invites the student to take a different perspective on the material of the Study Unit, and each calls for different combinations of the semantic elements from the Response Indicator " (Kegan 1972, p.65).

- The actual assessment involves not just a comparison of the student's response with the model answer and a resulting statement of 'correct' or 'not correct'. It is rather an analytical discussion which is precisely geared to the particular learner's solution of the problem.

This approach of Structural Communication may be of particular relevance to the field of autonomous learning because of the degree of attention it pays to the possibility of different learners responding in different ways and because of the precise and detailed feed-back the learner receives in his self-evaluation process.

3.7 Student-teacher contracting and project method

In the last section of this chapter two methods shall be shortly described for which self-evaluation is said to form an essential part or aim. Some readers may be surprised to see student-teacher contracting and project methods mentioned in the same breath. But, although originating from quite different sources and philosophical backgrounds, both approaches share a number of common characteristics which - for the purpose of this report - justify their joint treatment.

Student-teacher contracting is a method which aims at developping the self-management abilities of the student by actively involving the student in the decision process of what he learns and how he does it (Homme 1974; Lehmann 1975; Stewart/Shank 1973). For this purpose the teacher and the individual student make an agreement or contract, which includes as its components the learning objective, the methods or conditions to be used, provisions for practicing and applying the new abilities, and - most important for this report - it describes the methods to be used for evaluating the contract work. When introducing the contracting method for the first time, the components of the contract will be mainly selected and determined by the teacher, who will try to pay account to the skills, needs, and interests of the individual learner. When the learner has demonstrated the responsible use of freedoms, he gains more options in the decisions involved. Appropriately applied the contracting method takes away much of the horror of assessment. The learner strives no longer to pass the teacher's test; instead "student and teacher are working to beat that evaluative device" (Stewart/Shank 1973, p. 34). If the first attempt is not successful a new contract is agreed upon, which tries other ways to master the objective. In his review of contract learning, Lehmann reports that, in particular, the more independent students said that in their contract they themselves selected the evaluation strategy to be followed (1975, p. 129).

While student-teacher contracting, in particular in its variety as "contingency contracting", has its origin in behaviourist theory, the project method was developped as an educational device by Dewey and the functionalist movement, who recognized purposeful activity as a drive in itself. Today projects, which may be described as integrated working programmes designed around a central problem or idea, are used as instructional methods mainly in higher education (Adderley 1975). They demand initiative by the student and usually result in an endproduct, a report, plan or programme. Teaching staff serves an advisory function rather than a strictly instructional one. The leading idea of a project, which distinguishes it from typical exercises, is that the learner is in control of the working process and that he should be responsible for making the decisions which affect what he does. Although called by Adderley a revolutionary idea, an almost natural consequence of this approach is that "self-assessment and / or peer assessment by students should be a component of the assessment procedure" (1975, p.67). The arguments mentioned against such a self-assessment in projects are as usual the lack of expertise and the vested interest of the student. Authors in general, however, are confident that these difficulties can be overcome.

Student-teacher contracting and project methods focus on developping self-management competence in learning. In this context both emphasize the need for the learner at least to participate in the evaluation of his work, preferably to develop the ability for realistic self-assessment, but neither has developped or even suggested a methodological approach towards or a technique for self-evaluation.

4. RESEARCH FINDINGS

As has been stated above, the large majority of research studies and reports on self-evaluation in education deal with behaviour control, an aspect not essential to the present report. Thus even McLaughlin's research review on "Self-control in the classroom" (1976) focuses on the control of classroom behaviour and reports only a few studies which contribute to the topic of self-evaluation of learning. The results of these studies will be included in the appropriate sections of this chapter. The few research findings directly relevant to the purpose of this report can be grouped in three categories. They deal with (1) the ability of a learner to assign his own grades realistically, (2) the effects of internal as against external evaluation on performance and motivation, and (3) the degree and form of student misuse of self-scoring opportunities.

Before turning to these topics , however, a few more general points shall be mentioned.
The research reports and their results are sometimes hard to apply to educational 'real life', since for the sake of reducing bias-colouring it was often stressed for the subjects participating that their self-rating data would be used for research purposes only, as opposed to assessment and decision-making purposes.

This factor also accounts for some differences in the research results themselves: The self-assessment made by the learner differs according to whether his self-evaluation is announced (1) as being shown to the teacher or not, and (2) as contributing to or even substituting grading or as serving as a self-feed-back technique on the learning progress only.

Some studies hint at the relevance of different learner characteristics which affect the process and the result of a learner's self-evaluation (Maehr/Stallings 1972; Oles 1973). This indication is quite in accordance with findings from other educational research areas, which has led to the recent development of a methodological approach, known as aptitude-treatment interaction research (ATI). In ATI research the learning situation is seen as a complex system of interacting elements. Thus learning results cannot be explained by looking at instructional procedures or treatments only. The effects of learning in a particular instructional situation must rather be interpreted as the result of interactions between specific features of the treatment, which, of course, includes the evaluation procedures, and specific aptitudes or other personality traits of the learning individual. Although this approach may also prove fruitful for the study of the effects and effectiveness of self-evaluation of learning, it has not yet influenced the direction of research and hence is a suggestion for the future only.

4. 1 Ability for realistic self-assessment

In Huberman's study on Some models of adult learning and adult change, I found the following statement:

> "One significant - and unfortunate - finding in studies of autodidacts or self-learners is that they consistently underrate the value of their efforts, since there is no control nor approval from a certified institution" (1974, p. 47).

Unfortunately, Huberman gives no references as to the sources of this résumé. None of the studies I could trace in the course of preparing this report does support Huberman's statement. What may, however, be generalized from the research to date is the tendency of the learner in self-evaluation (1) to cling to the medium range of ratings and to avoid the positive or negative extremes in his assessment, and (2) rather to overrate than to underrate his achievement.

Krüger (197o) examines the ability of self-evaluation among secondary school pupils with respect to their annual grading. The motive for this study was the desire of pupils for a more democratic participation in school affairs, in particular in the field of grading. Hence 7,963 self-assessmentsof 814 seventh to nineth graders were collected in ten subject matter areas. These were compared with the grades given by the teachers at the same time. Krüger reported 63.8 % of "correct" self-evaluations - "correct" being defined as "agreeing with teacher gradings". Pupils were promised that their self-ratings would not be shown to their teachers. Krüger reported the following more detailed finding:-At least from the seventh grade on,pupils are able to a high degree to self-evaluate their achievement in school. The older the pupils are, the more their self-assessment approaches to the teacher's grading.
- There are no significant differences in self-evaluation between boys and girls.
- When self-and teacher evaluation differ, self-assessment as a rule is more positive. 4o.9 % of deviating self-assessments are below and 59 % above teacher grading.

From his findings the author suggests to use the learner's self-assessment as an additional information in grading.

Burke's research (1969) came from a similar background, i. e. the consideration that the traditional grading system may generate a strain which is often antagonistic to the goals of education. He investigated the effect of increasing the amount of student participation in the determination of their own university course grades. In his first two experiments on the use of self-evaluations in assigning course grades,43 and 38 students in management courses at the university of Minnesota students were asked at the end of their course what they felt to deserve as a grade, considering the amount of their individual work and considering what they felt they took away from the course. In addition they were asked, how they felt about the self-evaluation procedure and what they thought would be a fair distribution of grades for their particular class. A follow up experiment, which used 32 students of the same subject matter area, investigated the use of peer ratings in assigning course grades. Burke reported the following results:

- Student and instructor evaluations agreed in about 60 % of the cases. All cases of disagreement represented higher ratings by the learner than by the instructor.
- Less than half of the students in the first experiment felt comfortable in assigning their own grade.
- Using the traditional A-B-C-D-F- grading system, students in the second experiment found a mean distribution which included 9.9 C's, and .6 D's as fair. None of the 38 students, however, felt that they themselves deserved a C although 36 of them felt that some C-grades would have been fair.
- Concerning peer evaluation, there was a high agreement (83.3 %) of instructor and peer ratings, while peer ratings and instructor ratings were to a great extent unrelated to student self-evaluations.

Burke concluded that the results suggest that students are not able to assign their own grades objectively and realistically, since only few students perceive their achievement as poor. The peer rating method seems to be suited to evaluate student performance at least in classroom situations.

Strecker (1976) examines the problems of stimulation and examination in the field of verbal communication ability in colloquial English. The investigation of self-evaluation ability was only a part of his study. The subjects were 46 teachers participating in a distance study course "English for teachers of English", which aimed at improving verbal communication ability. While the level of competence at the end of the course was independently evaluated by two raters who were native English speakers, participants were asked in a questionnaire to give their own assessment (1) of their general verbal communication ability, and (2) of particular components of this ability, in both cases using a traditional five-stage grading system. A comparison of rater and self-evaluation led to the following findings:

- The evaluations of the external raters correlated to a much higher degree with one another than with the self-assessment of the participants. Although this is the case in all areas investigated, it applies in particular to the areas of pronunciation and grammar which only have correlation coefficients of .22 and .33 respectively.
- No participant assigned himself the positive or negative extreme rating, which however was used in all areas by the external raters.

The results indicated that - although they were teachers whose daily function it was to evaluate the verbal abilities of their pupils - the subjects did not demonstrate the ability for realistic self-assessment (measured against the external rater assessment).

Pohlmann/ Beggs (1974) compared the self-reported and pre-post measures of academic growth of 162 graduate students enrolled in statistics courses at Southern Illinois University. Their results suggest that the self-reported evaluations of academic growth are more influenced by the development of the student's effective orientation towards the subject matter than by the achievement proper.

4. 2 Effects on performance

Although McLaughlin (1976) reports some tentative suggestions that in some cases the permission to self-evaluate one's performance in programmed materials may improve test performance (p. 646), he summarizes the overall result of investigations into the effectiveness of self-control procedures as educational researchers in all fields almost expect any research to be summarized today : "The majority of results confirm that there are no differences between externally controlled and self-controlled procedures" (p. 648).

Maehr /Stallings (1972) examined the question whether testing and grading by teachers not only reduces the autonomy of the learner but also has a detrimental effect on his performance and motivation. In two experiments they compared the effects of self-evaluation (internal evaluation) and teacher evaluation (external evaluation). The learners' performance on easy and difficult tasks was observed, and also the learners' motivation to return to and work on the task further. The second experiment introduced as additional variables sex and need achievement. The subjects were 32 and 154 eighth graders respectively of American junior high school.

The following findings were reported from these experiments:

- There was no significant difference in performance due to evaluation conditions.
- There seems, however, to be an interaction between evaluation conditions and task difficulty with respect to continuing motivation. Subjects from the internal evaluation condition were clearly more interested in subsequent work on difficult tasks, while learners from the external evaluation condition preferred easy tasks on which they presumably could be assured of further success. This tendency was most clearly exhibited by high need achievment boys.
- No significant differences could be detected between girls and boys.

These results suggest that external evaluation may lead to undesired motivational consequences, in particular in the case of those learners who are inherently oriented to achievement.

4. 3 Student misuse of self-evaluation opportunities

Some studies reveal that learners in self-evaluation not only tended to overrate their performance but - in the absence of surveillance - gradually lowered the standards required in order to earn better ratings(see the studies mentioned by McLaughlin 1976, pp. 648 and 652). In some cases, in particular among children, this led to cheating. Because of the obvious vested interest the learner has in a positive assessment of his performance,the potential misuse of self-evaluation opportunities has always been a main concern in discussing the implementation of such methods.

In recognition of this fundamental problem, Oles (1973) designed a study to measure the degree and kind of student misuse of the self-scoring process. The subjects were 238 third to fifth-grade students of an Individually Prescribed Instruction programme in mathematics. They were taught to correct their own performance by means of an appropriate self-scoring answer key. If their answer did not match the one shown in the key, they were instructed to re-work those problems and check again. If the answers even then did differ, they either had to report an error in the key or to consult with their teacher. The learners received no grade for their performance but had to show mastery before going on to the next task. Potential misuse of this system was investigated by deliberately inserting incorrect but plausible answers in the student's key. An examination of 1,282 individual responses to these problems with incorrectly keyed answers had the following result:

Only in 12 % of all cases did the learners act as they were instructed. In 88 % of the ratings the learners either changed their answer to match the one shown in the key, or copied the keyed answer without trying to do the problem, or did not score their work at all. A correlational analysis showed that learners were not consistent in their overall response to incorrect answers. There was no relationship between the learner's rate of progress or his placement and his tendency to misuse the self-scoring system.

Since neither grading nor teacher pressure could be explained as the reasons for cheating, the study suggests that in this case the misuse of the self-scoring opportunities is an individual, non-consistent reaction which comes from the child's lack of understanding of the importance of proper self-assessment to himself.

5. RÉSUMÉ

5. 1 Abstract

The purpose of this report was to analyze documents dealing with self-evaluation of learning in order to survey and review different methods of self-assessment used to date in different educational systems and contexts. Contrary to expectations, the extensive literary search revealed only a disappointingly small number of reports and studies relevant to the purpose. Although self-evaluation, self-control, and self-assessment are frequently mentioned in recent educational literature and although it is common practice today to include self-evaluation opportunities in instructional materials, there is no equivalent research to date as to the effects or effectiveness of such self-assessment opportunities. It has not been possible to identify a single report focusing on practical experiences in the field, and the existing relevant empirical studies are almost a negligible quantitiy. The majority of books and articles on "self-control" come from authors of the psychological, in particular the psychotherapeutic field and deal with the forming of the self and how, in particular, undesired behaviour can be changed. It is an open question whether one can directly apply findings from the field of behavioural self-control to the problem of self-evaluation of learning.

Self-evaluation is not an all-or-nothing quality. External evaluation and self-evaluation are not mutually exclusive alternatives, but are blended in most instructional situations. It was suggested to regard the aim of learning as twofold: on the one hand to develop a capability of independent and responsible information-gathering and problem-solving, and on the other hand to acquire a meaningful set of knowledge which is at least partly determined by the consent of the society one is living in. Hence one of the main problems is to determine the appropriate proportions of external structuring of the conditions of learning and of the freedom of decision and the degree of self-evaluation of the individual learner.

In order to identify the basic problems involved, it was necessary to view the feasibility and chances of self-evaluation in the wider context of evaluation of learning in general, the two main functions of which were identified as competitive or summative on the one hand, and as diagnostic or formative on the other. These functions should not be confused. The analysis indicated the two main qualifications of a good assessor: (1) He must be a subject matter expert who also knows how to select and apply the appropriate evaluation technique in each case, and (2) he must be objective in order to judge the evidence without prejudice and personal preference. Self-evaluation thus turned out to involve two problems:

- Can the learner in principle be conceded the competence of making a realistic evaluation of his own learning?
- Even if the learner has the competence, can he be expected to apply this evaluative ability and to honestly reveal the results, considering the consequences of evaluation in a competitive situation?

The analysis of practical applications of self-evaluation began with a review of the Montessori method, the Winnetka and the Dalton plan and the German reform movement in education, all of which emphasized the necessity of guided self-activity of the learner and which used self-instructional and self-corrective materials. Additional reports of self-evaluation in a secondary school and in higher education lacked a detailed description of the self-assessment techniques applied. With respect to adult education, the analysis revealed conflicting tendencies: On the one hand, it was stated that adults, as compared to children, are capable of self-evaluation, but on the other hand, adults are not prepared for self-directive learning. Hence the problem of self-evaluation in adult learning is mainly not one of a missing cognitive capability for realistic self-evaluation, but a reluctance of openly applying this ability.

The importance of self-evaluation opportunities is, in particular, stressed in the field of distance education.. Although all institutions include self-assessment components in their materials, none of the major European institutions has been or is at the present time involved in any formal investigation, analysis, or even systematic gathering of information concerning the form, functions, or effects of self-evaluation. Self-evaluation is generally accepted as a feasible tool in methods of teacher training which use video tape recordings for improving teaching skills. As in most other cases, the result of self-evaluation here does not contribute to grading nor is it used to inform a superior about the teaching standards of the individual teacher. Its sole purpose is to give feed back to the learner, which in this case is the teacher. What has been said so far on the use of self-evaluation methods in different fields applies also to the special subject area of foreign language learning. As a special method in this area the audioactive comparative system used in language laboratories was described.

As the field of "programmed instruction" has been mentioned by many authors as the main source of self-evaluation procedures, a short analysis of self-evaluation features in typical programmes was included. Two developments springing from the desire to improve programmed instruction were described. Apart from the use of computers, which is seen as a mainly quantitative improvement only, a technique known as "Structural Communication" and its approach to self-assessment was analyzed in greater detail as potentially relevant to the field of autonomous learning.

Student-teacher contracting and project methods were shown to emphasize the need for the learner to develop the ability for realistic self-assessment, but neither has developped or even suggested a methodological approach towards or a technique for self-evaluation.

Research findings were summarized under the following categories: (1) the ability of a learner to assign his own grades realistically, (2) the effects of internal as against external evaluation on performance and motivation, and (3) the degree and form of student misuse of self-scoring opportunities.

The studies investigated revealed the following tendencies:

- The self-evaluating learner tends to avoid the positive or negative extremes and to cling to the medium range of ratings. He rather overrates than underrates his achievement.
- No general significant differences could be detected in the effects of externally controlled and self-controlled procedures on learner performance. Self-evaluation, however, seemed to result in greater motivation to continue working of difficult tasks.
- In the absence of surveillance, younger self-evaluating learners tend to gradually lower the standards required or take recourse to other forms of misuse.

5. 2 Suggestions for further development and research

The following points seem to be of particular relevance and hence are recommended for further consideration:

- It may be helpful to distinguish between primary and secondary assessors, who may be assigned different functions and who hence need different qualifications.
- A distinction should also be made between the intellectual capability for self-evaluation (cognitive component) and the readiness to apply this ability openly (moral component).
- Since the ability for self-evaluation apparently is something which can be developped, methods should be designed to train learners in various aspects of self-assessment.
- Particular attention should be paid to self-evaluation methods for complex and higher level tasks.
- Research studies should pay attention to the potential interaction of individual learner characteristics and different methods of evaluation.
- Greater care is necessary in fixing the standard for "realistic" self-assessment. To date it is in most cases the judgement of the teacher. There is, however, a large amount of literature which hints at the unreliability of teacher judgement.

APPENDIX

Both following examples of Structural Communication components are taken from Kegan (1974).

Example 1

This Investigation and Matrix are taken from a Study Unit on "Nutrition and Metabolic Efficiency". The Presentation and other sections have been omitted.

INVESTIGATION

Problem 1

A given amount of nutritious material can be obtained in one of two ways:

(i) Consuming a large quantity of food with low nutritional value and extracting the nutritious part.
(ii) Consuming food with high nutritional value, in which case less bulk is needed.

The second method is more frequently employed by the higher animals. Which items of the Response Matrix indicate factors that help such an animal to obtain the most nutritious food for itself from its environment?

Problem 2

It is not adequate for efficient nutrition merely to ensure that the food which is eaten is pleasant in taste and appearance, has a high nutritive value, and can be taken into the organism. Another important factor is to what extent the nutritive value of the food can be made available to the organism which eats it, and to what extent nutritive material passes through the gut and is lost in excretion. Remember, this loss refers only to the individual and not to the cycle as a whole. In fact it may well provide nutrition for some other organism. Select from the Response Matrix those factors which enable the organism to derive maximum benefit from the food as it passes through the gut.

Problem 3

The utilization of the food material by the body is of prime importance and is, in a certain sense, the key to efficiency. What factors do you consider to be important in the economy of the release of energy and materials from the food molecules, once they have been absorbed from the gut and incorporated into the organism?

Problem 4

How does the effective utilization of energy from the food make for more versatile day to day functioning of the organism? Apart from the energy requirements during growth, and for the maintenance and repair or replacement of old tissues, there are certain ways in which energy is consumed which are to the ultimate benefit of the organism as a whole. Which items of the Response Matrix do you think come under this category?

RESPONSE MATRIX

coordinated muscular system 1	mucus or cilia 2	technique for storing food and energy 3	ability to select diet 4
excretory system 5	division of gut into specialized functional regions 6	heart and circulatory system 7	gut microfauna and flora 8
parasitism as a way of life 9	temperature control 10	nervous system and hormones 11	osmotic control 12
senses—sight, smell, taste, etc. 13	division of labour between internal organs of the body 14	periodic feeding 15	increased body size 16
skeletal tissues 17	heterotrophism as a way of life 18	correlation of enzyme type with dietary input 19	lungs or gills 20

Example 2

This is taken from a Study Unit on "Rings and Fields" in modern algebra.

INVESTIGATION

Problem 1

What are the requirements of an additive group?

Problem 2

Having ascertained that a set and + are a group, what must also be true before ring structure is established?

Problem 3

What items of the response indicator are necessary for a field, but not essential for a ring?

Problem 4

There are some unusual features of Boolean algebra (for example complementation) that prevent it from qualifying as a field. Find the items of the response indicator which

(a) Apply to Boolean algebra but not to fields.

(b) Refer to exactly similar statements for both Boolean algebra and for finite fields (take x and * to be synonymous for this purpose).

RESPONSE MATRIX

there are no divisors of zero 1	commutativity for + 2	$1 + 1 = 1$ 3	distributivity 4
*is a binary operation 5	$a + bc = (a + b)(a + c)$ 6	a finite set of elements 7	unique inverses for * except for the zero element 8
idempotant law 9	unity element 10	+ is a binary operation 11	associativity for + 12
unique inverses for + 13	regular elements 14	commutativity for * 15	De Morgan's Laws 16
associativity for * 17	zero limit 18	law of absorption 19	an infinite set of elements 20

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THE SOCIAL VALIDATION OF AUTODIDAXY

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THE SOCIAL VALIDATION OF AUTODIDAXY

I - Autodidaxy: general considerations

The autodidactic process is very closely linked to what is known today as Lifelong Education. These two notions are indeed inextricably entwined, even though this fact remains a virtually unknown, and above all underrated phenomenon in a world where qualifications (various kinds of diplomas) are the order of the day and where they continue to be given the fullest recognition by existing institutions. One has only to consider just how much these qualifications count, especially when applying for a first job for instance.

Furthermore, one might well hold, the division of labour in society is such that autodidaxy remains a separate phenomenon, whose prime aim is to ensure the "cultural salvation" of the individual involved in such a process, even though the latter still remains badly looked upon in the eyes of society. But in fact the positive, constructive validity of knowledge willingly acquired (rather than merely accumulated) is the obvious natural basis for the dynamic overall process underlying the process of Lifelong Education.

Another question - that of free time - strikes me as important, as it seems to be the privileged framework in which autodidaxy takes place: its productive dynamism has important political, economic, social and cultural consequences for individuals, communities (associations and trade unions) as well as for the nation as a whole.

From this point of view therefore, broad horizons open up where autodidaxy concretely defined in relation to Lifelong Education seems to my mind to take the form of autonomous, above all voluntary education, oriented towards a rational acquisition of knowledge specifically chosen by the individual.

The individual's aims may be to master the facts of a given sphere of knowledge, so as to be better integrated into the community, to define himself with reference to the power which knowledge brings with it, or simply to come to a better apprehension of reality and existence in general.

This general outline of autodidaxy fits into a broader spectrum which ranges from voluntary efforts at learning to read and write, to the command and appropriation of "scientific knowledge".

From this point of view, autodidaxy is a novel form of the educational process which Lifelong Education must inevitably take into account. It is essential that one should observe the educational process from the outside in order to get it into perpective but Lifelong Education doesn't seem able to do this.

There is no lack of examples of autodidaxy which bear witness to the fact that such a situation gives birth to novel forms of knowledge which continually overrun and expand the limits of purely academic knowledge.

But autodidaxy is also something else: it belongs to the realm of common sense. That it is essentially anchored in the everyday experience of every individual is beyond question. The latter provides the spring-board for autodidaxy. In the same way the entire system of self-education should start from empirical experience and valorize it so as to reach a better understanding of the human being, and so as to master events more successfully. In this sense, understanding the phenomenon of autodidaxy becomes a complex affair, raising a certain number of interesting questions both for those involved in the theory, and for those involved in educational practice.

These questions concern above all the autonomy of the autonomous learner's knowledge, the role of the various "instruments" necessary for implementing autodidaxy (i.e. educational technology, books, mass media, etc.), the help provided by the various socio-educational or socio-cultural institutions to encourage the individual involved in an autodidactic learning situation, etc.

Consequently it is by no means obvious that it is easy to escape from the determining social factors which influence educational or auto-educational activity. The impact of such social pressures is manifest when one considers the simple fact of just to what extent the individual is bombarded by a mass of carefully sifted information and stimulations (most of which serve to publicize and dramatize historical facts, and not to educate the individual and his critical faculty).

Consequently one is led to question the relationship between the individual and the mass of information which bombards him from all sides. How does the individual react to it? How much freedom does he have not to blindly yield to solicitations of all kinds made by the different institutions whose power of manipulation has reached exorbitant proportions nowadays? Where can the individual find the necessary help to resist such pressure which is highly likely to make him the victim of a sea of information, destined to become rapidly obsolete.

Certainly not, I think, from the formal educational or social institutions which legitimate recognized forms of knowledge. The autodidactic learner therefore seems to be taking a risk in committing himself to such a process since his efforts in self-education are only given minimal support by a society which offers very few possibilities adequately suited to situations of autodidaxy, favourable both to the development of society and the individual's personality. It appears today in fact that self-education may offer exceptional possibilities for the individual, capable of helping him to adapt to the constant changes of contemporary societies, and awaken progressive-thinking, nay revolutionary people to strive towards fresh strategies and alternatives to the social, political, economic and cultural situation today.

Formal education certainly does not foster such possibilities: the structure and syllabuses to which it is subject and the fact that there are excessive numbers of pupils and too few teachers does not enable all members of the community, of all ages, to satisfy their different material and cultural needs, nor to broaden their "temporal horizons" and strengthen their various expectations. Autodidaxy therefore seen as a part of the framework of Lifelong Education represents an opportunity for the largest possible number of individuals to have access to knowledge.

The satisfaction of individuals' learning needs and desire for culture remain nonetheless directly dependent upon a social structure which is devised and upheld by a group of conservative State bodies which consider that the autodidactic learner's knowledge is not legitimate: not having been acquired according to the "normal" procedure (above all pedagogical), it raises the question of social validation.

Were society to openly acknowledge the validity of the autodidact's knowledge, one form of encouragement could consist of offering institutional facilities to individuals so as to enable them to choose and to follow certain objectives aimed above all at their voluntary self-education, without encountering any major difficulties.

Otherwise if autodidaxy is not backed up and encouraged by society it leads to superficial ephemeral knowledge. In a certain number of cases one observes how the autodidact's learning is often subjected to censure, even giving rise to legal prosecution in a certain number of totalitarian societies where the acquisition of "forbidden" information causes the individual to be subjected to repressive measures, or even severe punishment.

It is worthwhile pointing out this important fact which provides an eloquent demonstration of the impact of the social framework upon the phenomenon of autodidaxy and the individual who practises it. Consequently one must not forget that autodidaxy is far from being a neutral educational practice, any more than it takes place on neutral ground.

Hence political, sociological, ideological, and one might say cultural implications have their place in the global framework of the autodidactic process. Who is not aware of the impact of social stratification upon education, and therefore upon self-education in general? In most societies this factor is the fundamental obstacle which alienates a large section of the population for the benefit of a privileged minority group.

Seen from this point of view autodidaxy appears an issue with real social, political and cultural implications for a certain number of people who have been "excluded" from having a formal education. It therefore has undertones of contention and struggle.

But the context in which autodidaxy may develop differently is also characterized by "conflictual" elements depending on the way in which a particular society is organized, and above all on the importance given to "cultural power" compared with other forms of power, especially economic and political, which dominate social systems, and on a larger scale , the various forms which society takes.

These "conflictual elements" obviously do not have the same bearing in cases of social injustice and totalitarian power as in a context where democratic principles are in force, or at least continually upheld.

However in both cases it can be said that autodidaxy does not receive sufficient encouragement from the community.

Accordingly, social or cultural action within the field of education comes up against ideological obstacles due to the fact that educational systems reflect the political options of the established mechanisms of power. The same is true both for the type of help given to established formal education, and for social and above all financial help given to education which takes place in the non-formal framework in which autodidaxy is so rightly situated.

It appears today that in spite of such sizeable obstacles, a fair number of societies are opting for a more progressive and modern approach which contributes one might well say to the development of educational institutions (although the latter remain essentially conservative). One must also recognize the fact that these associations are acquiring modern "tools" (mass media, video, correspondence courses, networks, clubs, etc.) which favour, facilitate and encourage autodidaxy conceived within the framework of Lifelong Education.

And in some cases it has been shown that there is a relation (however tenuous) between formal and non-formal education. But the problem we are faced with today is the one concerning the coordination and concertation (or consultation) between different institutions dispensing formal education and different networks of non-formal education, above all autodidaxy.

And as the system of formal, socially legitimized education appears as the only channel for giving a social validation to knowledge, the former offers only very few if any possibilities for validating knowledge which has not been acquired according to the norms and values of the said system. For this reason therefore autodidaxy remains outside the pale of social validation and only very rarely gives access to the social "motorway" open only to those in possession of driving licences validated by the simple fact that they have been obtained from driving schools recognized by the social system.

Society appears to have difficulty in incorporating and using the kinds of knowledge acquired in the networks of autodidaxy. As knowledge acquired in this way endangers - at least to conservative minds - the integrity of the established educational system, it is extremely difficult to give it a social validation. Autodidaxy cannot easily be evaluated in a traditional manner, which generally adopts certain objectives which are defined by the institution. It so happens today that this aspect of the problem which affects previous validation characterizes every field where autodidactic learning takes place, both in socialist and capitalist regimes.

II - Some views on the phenomenon of autodidaxy in Yugoslavia

The distribution and circulation of information, political, economic, cultural and other contacts have now become common in Yugoslavia. They most definitely testify to an unmistakable openness of mind which proves to be one of the fundamental conditions for coherent internal dynamism of the social system as a whole. This dynamic force favours various forms of sociability and communicability which characterize Yugoslavian society today.

Obviously, as in every society in evolution, Yugoslavian society is not without its internal problems and contradictions which henceforth will have to be solved if new modes of social, cultural and economic life are to appear. It is in this context that a permanent system of validation and development of various activities and socio-cultural institutions, both formal and informal, should appear.

A few years ago one could easily have said that the educational system in Yugoslavia was still very traditional and that consequently it preserved the structure of rules and standards which such a system conferred upon it. Today however it seems to be adapting itself to the new economic, social and cultural necessities of Yugoslavian society. And so education seems to be at the base of the dynamic development of science and the general cultural features of our civilization, due to the fact that new relations in production and division of labour are being set up both on the regional and national level. In Yugoslavia, the educational system appears as a major element for the capitalisation of the work force; for this reason it has an especial interest for those responsible for educational policy. It was in this direction that radical changes were made, initially at the level of primary education, and later at the secondary level by the introduction of teaching of a specific kind with an orientation of the pupils towards well-defined professions. For the moment, reform is being extended to the university system.

Such is the state of the educational system in Yugoslavia today.

Autodidaxy in Yugoslavian society is developing in this context. The role of autodidaxy as a means of acquiring general and specific knowledge was more considerable formerly than it is today. It was at the time when Yugoslavia was still an essentially agricultural country, when our beautiful country with all its human and natural potential was only very slightly industrialized. The illiteracy rate was high and for a large portion of the population there was no question of acquiring knowledge in the few existing schools.

Consequently knowledge came to a large portion of the population by means of autodidaxy. It was indeed the only means which the population had of educating themselves and of finding work prospects and earning their living.

Today things are far better. The illiteracy rate in our society is estimated at 10% of the population over the age of 10. Furthermore, it seems that the highest rate of illiteracy is to be found in the over sixties age group, for whom the phenomenon dates back to before the second world war.

Illiteracy is practically non-existent among the young and middle-aged. The general trends observed in the field of education and culture in Yugoslavian society gives reason for optimism, especially as regards reform of the educational system.

One of the fundamental laws of the Yugoslavian socialist system is "The law of associated work" which was promulgated in 1976. By its inspiration and its global nature it attributes great significance to work and the results of work. According to this law, material rewards are earned by work and not because of diplomas one has acquired. The aim and the spirit of this law is that a person should be appreciated according to the work

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he is capable of doing and how he does it, and not only by what is written on a paper. This is a good way of both superseding the traditional spirit of giving undue importance to diplomas obtained in schools and of encouraging individual work. The legal formulation of this idea falls perfectly within the framework of the socialist spirit whereby every individual should be rewarded by society according to how his work may be valued.

However, it is true that one may observe that the spirit and the stipulations of this law come up against a number of difficulties in the conditions of social practice. The reputation and influence of diplomas in the evaluation of work are still the standards of official evaluation of knowledge acquired by autodidaxy, but this knowledge is not validated by adequate diplomas.

The situation described above is strong evidence that there is still a good deal of room and time for innovation in Yugoslavian social life. In Yugoslavian society - and the same goes for the rest of the world - to a great extent it is the institutions dispensing formal education which hinder autodidactic learning from being validated: they are in fact today the prime obstacles against its social validation. Institutions of formal education remain the absolute authorized agents for validating knowledge by issuing "confirmations of knowledge" - diplomas - even though the educational system today is undergoing substantial reform.

As autodidaxy is by very essence a relatively autonomous activity, since for the most part voluntary and individual, it is consequently the opposite pole to schools; one might even go so far as to say that it is a revolutionary element to be found within the sphere of the acquisition of knowledge, one which lies outside the scope of controlled school syllabuses and follows its own directions and systems of education which are not socially evaluated and recognized and which cannot therefore expect the support of the representative of society - school - but rather the very opposite.

There should be a link between the social acknowledgement of knowledge acquired by autodidaxy on the one hand, and the opportunities for flexible evaluation of this knowledge on the other, since the overall social system of education should at least for the time being represent the basis of every educational process. This constitutes therefore the major contradiction which Yugoslavian society has to solve (others as well), if it wishes - in the spirit of the above-mentioned law on the evaluation of work - to provide a true evaluation of knowledge. Such a solution would enable autodidaxy to acquire unexpected value and credibility. The efforts made by Yugoslavian society in favour of autodidaxy are obvious even if they are still limited and if the results obtained by autodidaxy are not as prized as diplomas obtained through the formal educational system.

It is perhaps now time to take the opportunity of giving an example which illustrates a positive practice which is adopted socially. One of the few activities in the field of autodidaxy which is often validated in and by society is artistic activity. The finality of work takes precedence over the means used. From this example one may observe that society can easily find criteria for the evaluation of the true effects of men's work without taking diplomas and evaluation into consideration.

In considering the sum total of educational theory and practice in Yugoslavian society, it seems to me that one may find certain criteria for the evaluation of knowledge which has been acquired individually (regardless of the form which it takes) according to the valorization of autodidaxy allowed by "The law of associated work". In view of this it seems worthwhile pointing out innovations which have taken place in Yugoslavia in the last two or three years.

These consist of implementing legislative measures which enable people to follow some kind of training whilst working (this legislation guarantees leave for training).

In Yugoslavia as in other countries an alternating work/education system exists. But the system has often been left to the will and possibilities of the individual in Yugoslavia. Society gave scant encouragement to global planning and the creation of specialists interested in this type of education. This enables those students and workers who so wish to interrupt and resume their studies as they like at a certain moment of their lives. A small number of these autodidacts enroll in institutions dispensing formal education, without necessarily having diplomas but on condition that they provide proof validating their knowledge and that they take a certain number of exams required for entrance into the institution. This practice of giving a social validation to knowledge acquired in an autonomous fashion, without a diploma corresponding to a period of schooling spent in an educational establishment within the school system was introduced about fifteen years ago and is still in force. However, Yugoslavian educational practice has taken on a new dimension in the form of "education starting from work experience". This form of studying has fresh significance both for society and for the individual.

I have observed in Yugoslavian society today that those who alternate work with study are people who have proved their capacity to educate themselves or better still, they have obtained and proved their knowledge by dint of their individual efforts. It is only after their firm has recognized their capacity and understood the practical necessity of their knowledge and of the social validation of this knowledge that the firm allows the workers in question to complete their knowledge (of a particular field) in institutions run by the national educational system. Consequently these persons complete their education and update their previous knowledge. The newly acquired knowledge is validated by a suitable diploma corresponding to the level of studies reached in the educational system. This system of acquisition of knowledge has another advantage which is particularly valuable in contemporary life.

The desire to alternate work and study has now become a necessity. This has great significance in a situation where unemployment is a dominant factor today.

This manner of studying which consists of linking the results of education carried out in an autodidactic fashion while working and starting from the place of work and once completed having it validated by the national educational system cancels the uncertainty which characterized all those following formal courses in recognized national educational establishments (formerly the question they asked themselves was "Where am I going to work, and what shall I do once I've finished studying?").

Institutionalized schooling at all levels produces specialists who reflect a force of inertia, both qualitative and quantitative which has no real coordination with the needs of society, and which above all does not take into consideration the validation of knowledge acquired by autodidactic means. In a way this seems logical: there are many specialists who are out of work although they are in possession of recognized diplomas who feel it would be going a bit far to validate by new diplomas the knowledge of autodidacts, who very often already have jobs. In this way those who have already studied in a recognized institution see their opportunities of finding a job even further reduced. However, the logic of such an argument can only be upheld until truly adequate forms and channels for the coordination and validation of knowledge suited to the needs of society have been found. We feel that in Yugoslavian society with an educational system which uses the actual productive work system as a basis we are working towards an interesting and valid approach to the evaluation of autodidaxy, and of knowledge in general which if given the required follow-up and backing from practical social life can represent an alternative solution in the sequence imposed between formal institutionalized education and learning and non-formal education - alias autodidaxy - in all their socially applicable forms and in the sphere of work. The validation of knowledge individually acquired within a system whose essence

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we have briefly sketched out is understandable per se, by the very fact of its existence.

Conclusion

It seems that the obstacles in the way of evaluation and social validation of knowledge are not deeply inherent in the order of things in modern societies, especially in Yugoslavian society. It is rather as if there are barriers which have been artificially invented, consciously or unconsciously so as to preserve the advantages of formal educational systems which fairly often results in the fetichism of diplomas which often serves to hide wasted efforts. However, the new practice of schooling during working hours gives rise to a far more flexible situation and opens up new horizons for the evaluation and social validation of autodidaxy.

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SELF-EDUCATION OF TEACHERS -
the Fundamental Component of the System of the Further Education of Teachers.

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Self-Education of Teachers - the Fundamental Component of the System of the Further Education of Teachers.

History has proved that since its establishment the profession and work of the teacher has borne immense social importance. It is the teacher who actively contributes to the development of the productive forces of society, namely to the formation of man who is the creator of all material and spiritual values. Every citizen passes through the hands of the teacher who is the first to systematically acquaint him with everything that man has attained in the field of culture and who thus prepares him for work aimed at the further development of mankind. The teacher to a considerable extent predetermines what sort of a worker his pupil will be. The level of the social materialization of the teaching profession fully depends on the socio-political systems, on the character of social relations.

We are convinced that the socialist social system is that system in which the position of the teacher maximally corresponds to his social mission. Socialism has unambiguously raised the role of the teacher and has endowed his professional mission with a profound social meaning. This is proved by the care which the communist and workers parties and the governments of the socialist countries devote to strengthening the authority of the teacher and to the systematic improvement of his working conditions. Socialist legislation guarantees the teachers' professional rights, the honour and dignity of this profession and ranks the teaching profession among the most highly respected. In the socialist countries we approach the solution of the problems related to the education and further education of teachers considering the said factors and the self-education of teachers is considered within the context of life-long education.

The systematic, life-long education of teachers in the socialist educational systems has the following charasteristic features:

a/ the systematic in-service improvement of his educational mastery is the professional duty of every teacher.

The teacher fulfils his obligation by continuously forming his educational skills acquired during initial training by systematically analysing and generalizing his personal educational experience and that of the other members of the staff. This is the implementation of principles which have many times been emphasised by leading educationalists of all times and which may be expressed by saying that a teacher remains a teacher as long as he systematically educates himself.

b/ the further education of teachers is implemented first of all with the help of the system of institutions for the further education of teachers. These institutions have a methodological and educational character, be they central institutions for the further education of teachers, regional and district educational institutes or methodical centres, Houses of Teachers or faculties of institutes of higher education, specialized in the further education of teachers and administrators in the field of education, all are centres for the methodical training of teachers which see to the dissemination of the latest knowledge in the educational sciences and of the best experience in educational practice. Model and demonstration schools serve as for the exchange of local centres for the exchange of the best experience from educational work and have the character of self-educational institutions.

c/ insofar as the forms of the further education of teachers are concerned in recent years a wide variety of such forms has been used in the socialist countries, such as:

- in-service training,
- further education for which teachers are released from work for the duration of the study course,
- self-education

In-service training for which teachers are not released from work includes mainly common preparation and evaluation of teaching and instruction, the demonstration of certain methods and technical educational media, individual and group visits to lessons with subsequent evaluation, the exchange of experiences in subject methodical groups, at conferences of classmasters, in educational councils of schools, at briefings held in cooperation with the trade union branch, individual and collective generalization of educational experiences in educational readings and the defence of the presented papers.

A specific form of in-service training is attendance at various courses. These courses are aimed at further educating the teachers in the field of Marxism-Leninism, pedagogy and psychology, the subject which the respective teacher teaches and the methods of instruction. The courses which have various forms/basic, subject, specialized, etc./ usually last for 4 weeks and every teacher should attend one of these courses once every five years. The courses observe the given syllabi and curriculi, which regulate the content and organization of lectures, seminars, practice in the laboratory, etc., as well as surveys of the literature recommended for independent study.

As concerns the self-education of teachers the teacher in the socialist educational system is offered various options. The said option consists in the study of available literature, attending lectures, seminars and consultations organized by various institutions involved in the further education of teachers /Houses of Teachers, educational and other faculties and departments of institutions of higher education, the Socialist Academy, events organized by various hobby organizations, ets./, participation in the work of educational methodical centres at schools, educational and other scientific conferences and educational readings, the use of the mass media and of the output and services of information institutions for educational information, etc.

d/ the basic structure of the system of the life-long further education of teachers and other educators proceeds in three stages:

1. Stage 1 of the further education of teachers follows up on initial education, secures the induction of the beginning teacher in his new school. For every teacher the first year of service is his induction year. Following the induction year and after several years in service the teacher enrolls in the post-diploma education organized by an institution of higher education. The first stage of the further education of the teacher is completed with a complex evaluation of the results of the work of the young teacher and following the approval of the school principal the orientation is suggested of his further professional development.

2. Stage 2 of the further education of teachers is the innovation

/up-dating/ stage. In the Czechoslovak Socialist Republic this usually takes the form of two year study courses at an institution of higher education, roughly after 6-8 years of service. The teacher is not released from work and this type of further education is also compulsory for all teachers. The objective of the second stage of the further education process is the further ideological, political, educational and professional perfection of the teacher, the allround improvement of his educational skills and the development of educational creativity. This post-diploma study passing of final examinations before a commission appointed by the dean of the respective faculty. The up-dating function of this stage of the further education process mainly consists in that the teacher will acquire the knowledge of new educational methods and will deepen and complement all components of his teaching skills and qualifications.

If a teacher has been awarded an academic or scientific degree in the field of the educational or psychological sciences or if he has raised his qualification by attending a post-diploma study course needed for raising his specialized qualification then the said achievements are considered as being equal to post-diploma studies.

3. Stage 3 in the further education of teachers is voluntary. This is a specialization stage in which the teacher avails himself of various forms of studies to systematically raise his qualification which allow him to systematically up-date and up-grade the scientific and methodical content of his education and educational work, maximally respecting the needs of society and observing his talents and individual interests. Basically this is a form of in-service study for which the teacher is not released from work.

A significant feature of the second and third stages of the further education of teachers is the close relationship between in-service study and research work.

Apart from the said three stages of further education, a form of further education of teachers is continuously run aimed at solving the current problems of educational work.

A significant factor in the further education of teachers and one which has an integrating function is the ideological and political schooling of teachers organized by the school principal in close cooperation with the political authorities.

e/ as for function the system of the further education of teachers is oriented to the work of the teacher both in the school and out of school. It forms his personality which in practical situations is manifested both in his concrete attitudes and in the standards of his performance. With regard to the performance of the teaching profession the system fulfils the function of raising the qualifications of teachers in its entire complexity, i.e., adaptation /induction/, compensation, upgrading, retraining, extension, specialization and innovation, even though one of the said functions will usually be predominant in any one type of further education.

Primary attention is being devoted to the innovating function of the teacher´s qualification as allowing him to establish the important interaction between educational theory and educational practice, between projects of the further development of the educational system in Czechoslovakia and their implementation. Thus, for instance, in the Czechoslovak Socialist Republic a reform has been implemented of the educational system which reflects the latest knowledge in educational theory and practice and stimulates the teacher to acquire the new educational principles and to implement them to the best of his abilities in his everyday teaching practice. The mediated impact has been to stimulate the teacher´s need for further education.

f/ the system of the further education of teachers is not only related to raising the qualifications of teachers but also includes the further education of school administrators and of other personnel working in educational systems, the further education of personnel employed in educational and psychological services operating within the educational system.

g/ the fact that teachers are educated at institutions of higher education where they acquire a broad profile education allows them to successfully serve in schools of different levels and different types. The very method of the initial education of teachers is conceived as an open and dynamic system which makes it possible to raise their qualifications continuously through the medium of life-long education, in compliance with the new needs of the development of the socialist society and the development trends of scientific and technical progress.

As concerns the content of further education of teachers emphasis is put on the even representation of all components of this education, i.e., ideological, political and moral, educational and psychological and subject. The ideological and political education of teachers is considered as being that factor which integrates teacher education as entity and allows the establishment of a logical interaction between the social sciences and the laws of the natural sciences. It allows every teacher to be a good educator. Considering the relation between the teacher and the educational sciences we have to bear in mind not only the traditional pedagogical disciplines, but also general and comparative pedagogy, educational biology, educational sociology, the theory of the administration of education, family education,education in child and youth organizations, the pedagogical aspects of enlightement work. All components of the system of educational sciences concentrate on solving the most important problem - the forming of the communist outlook of young generation and the forming of the all-round developed personality in the conditions of building up a highly develpped socialist society.

h/ With regard to the further development of the educational system the systems of the further education of teachers
- partake of the evaluation of the educational contribution of new scientific knowledge, new creative works in the field of art, new phenomena in the life of the young generation in particular and in the life of mankind in general.
- stimulate and study educational experiments, influence the creation of new textbooks, technical educational media, etc.,
- help efficiently disseminate the innovations in the content, methods and organization of the educational process /the implementation of changes/.

With regard to the above said, the problems of the self-education of teachers are considered in the context of their lifelong education. The teacher is the decisive factor in the implementation of the whole system of the further education of teachers - the teacher's motivation, habit of self-education and use of leisure time for self-education have fundamental significance.

The relation between the further education of the teacher and the performance of his profession is quite natural and is given by the fact that every teacher is basically a teacher to himself. During his years in service the teacher gains wide experience which he analyses and generalizes, strives to apply the results of these analyses and generalizations in his educational practice and through self-education he makes every effort to keep abreast with the development of science, technology, the cultural and educational systems, the culture and the life of society in general. It is logical that such self-education will change the teacher´s educational personality. The self-education of teachers is thus the fundamental, integral component of the system of the further education of teachers where the activity of institutions for the further education and the individual forms of the further education of teachers consist in systematic and organized aid to teachers in the implementation of their self-educational programmes. For the teacher these institutions become the forum for meeting experienced and successful teachers, for coming to understand their innovations and for applying these innovations in the educational process. This well known tendency leads to the establishment of organized groups of teachers, methodical groups, subject commissions, etc., at different levels of organization, which often fulfil various coordinating functions and in special cases result in the teachers´ participation in research projects.

The effectiveness of the self-education of teachers is often discussed. We believe that the self-education of teachers will only be effective if it is implemented in close relation with the needs of raising the level of educational activities and with the requirement for raising the teachers´ qualification. Rationally, this type of further education can only be implemented in an effeciently functioning system for the further education of teachers, i.e., such a system which is provided with adequate personnel, material and technical equipment, information and funds and operates as an integral component of the educational system and secures that the flow of educational and other relevant scientific information from the authors of the information reaches the teacher and that from the teacher it proceeds to other teachers. It allows the teacher to purposefully educate himself and thereby to attain ever greater political maturity, communist awareness, to deepen his knowledge of his subject, to extend his general knowledge, his cultural and political insight, to realize his responsibility to society and to gain an ever better grasp of educational and psychological knowledge.

N/

The proper social function of the self-education of teachers depends to a great extent on the activity of various information systems, in the given field it concerns mainly the system of scientific educational information. This system should represent a unifying source of knowledge for the scientific work in the field of educational sciences as well as for the self-education of the teacher.

The self-education of teachers /and administrators in the educational system/ proceeds from the principle that collective forms of methodical work are efficient only in case they are integrally linked with systematic, purposeful self-education. For this reason the systematics of self-education is a matter of primary importance in the socialist countries and numerous books and articles have been written on the subject.

Leading educationalists mostly agree that self-education of teachers is a planned and organized activity, based on individual plans of self-education. Generalizing the views of educationalists, such education is materialized within the context of the life-long education of teachers and imcorporates mainly four basic components: raising the teachers´ ideological and political levels, raising the scientific and theoretical levels of the teachers´ knowledge in their specialization, raising the level of teachers´ knowledge in the field of pedagogy, methodology and psychology and finally raising the level of education and culture. The educationalists also agree that the self-education of teachers is the baisc form of the further education of teachers and only differ on the range of self-education forms.

Thus, for instance, F.G. Panatsin in his book on pedagogical education in the USSR includes in self-education preparation for the lesson, the fulfilment of tasks which have been set to the teacher in courses which he attends, preparation of papers and communications which the teacher is going to present at courses which he attends, attendance at these courses, reading of the literature and attendance at theatre performances. He puts emphasis mainly on two forms of self-education, i.e., attendance at post-diploma in-service courses held at colleges of education and at courses held by institutes for in-service training for teachers /who are or are not released for such courses/. He attaches primary importance to reading books and periodicals and in this connection he points to the significance of libraries of all types. Even though self-education is a voluntary matter efficient surveillance is its indispensable component /discussions., colloquia, reports read at various educational meetings, at specialist conferences, etc./

Cycles of lectures, group and individual consultations, and seminars should be considered as being an indispensable condition for the process of self-education of teachers.

M.L. Portonov and V.S. Kutyev list the following factors as being fundamental for the process of self-education:
-the interaction of the content of self-education and the needs of the educational work of the teacher,
- the combining of scientific and theoretical training and the learning of skills and habits indispensable for educational activity,
- the acquisition of a complex knowledge of the questions of Marxist-Leninist theories, of the scientific foundations of the subject , psychology, didactics and the theory of education,
- the harmony of the content of self-education and the level of the preparation of the teacher, his interests and leanings,
- the linkage of the individual work of the teacher and his participation in collective forms of further education,
- the interlinkage between self-education and the creative work of the teacher.

As concerns self-education the authors consider the following aspects to be most important:
- the systematic acquisition of knowledge of the current problems of Marxist-Leninist theory and of question of the ideological and political education in the current epoch, and the analysis thereof,
- updating and upgrading knowledge in the field of pedagogy and psychology,
- the systematic raising of the level of knowledge on the theory and method of the subjects taught,
- raising the general cultural and educational level of the teacher himself.

As concerns the content and methods of self-education educationalists believe that they depend both on the education of the teacher and on the goals which the teacher should attain within his further education.

Self-education in itself assumes systematic work, its day to day and long-term planning, the selection of rational forms and methods of acquiring new knowledge and new subject mater, grasping analytical methods and methods of generalizing own and collective experience, the gradual approach to methods of scientific and experimental work.

There exist model programmes of teachers' self-education which list items, subjects and the literature, set deadlines for the completion of the study of the individual themes and list the assumed results of self-educational work /e.g., the paper, a communication presented at the meeting of the methodical group, a paper describing experience gained in the classroom./.

The literature dealing with self-education lists the methods and procedures which the teacher involved in the process of self-education, such as excerpts, conspectuses, summaries, annotations of the literature read, deepening the plan of self-education, instructions for card filing, containing notes on excerpts and on the structure of the excerpt file. Fundamental significance is attributed to forms and methods of administering the process of self-education and to questions related to effective aid to teachers involved in self-education. This approach finds concrete manifestation in discussions on questions related to self-education in various bodies involved in the problem area /educational councils, trade union meetings, meetings of methodical commissions, etc./ and in organizing meetings at which teachers involved in self-education will pass on their experience to their colleagues with whom this experience shall be exchanged, by holding individual consultations between school principals and school teachers on the principal trends of self-education, by joint evaluations of difficult items in the self-education plan, by drawing up recommendations with the aim of raising the educational efficiency of lectures, assisting the teachers by communicating to them the experience of the principal himself, by preparing papers on educational problems, by stimulating those teachers who are best disposed for scientific work, by suggesting the aims of self-education, etc.

Next to the said effective assistance granted to the teacher involved in self-education by individual or group consultations the teacher will find many materials for study in the resources centre which will help him put through his self-education plan. These documents include surveys of the literature dealing with various subjects, documents on experience gained in the process of self-education, variants of self-education plnas, texts of lectures, outstanding papers, annotated records, models of conspectuses, new books and other publications, etc.

The evaluation of the results of the self-education process is based on the premise that these results may be evaluated mainly from the quality of the educational process and the level of the pupils' knowledge.

A significant factor in the field of self-education in the current epoch when demands are being increased on the scientific administration of schools is the self-education of the administrators at school level. Educationalists M.L. Portnov and P.V. Khudominskiy deal with this problem area very extensively. They emphasise especially three forms of self-education suitable for administrators at school level, namely for school principals:

- independent work within courses and seminars,
- purposeful, goal-oriented independent work, carried out in compliance with the preparation for the lesson or other concrete actions, such as the meeting of the educational council, conferences, consultations/.
- independent work aimed at raising one's own ideological, political and cultural level, expressing new knowledge, generalization and implementation of the best experience.

One of the most significant features of self-education is that despite being an individual type of education reflecting the differing interests and needs of every teacher it does not lead to an unorganized self-educational process. Authors dealing with the problems of self-education are basically agreed that it is possible and in fact indispensable to regulate this activity using defined suitable and tactful methods. This in itself means that it is necessary to come to understand the principles underlying the selection of themes, the planning and organization of self-education.

The purposeful and rational planning of the self-educational activity of teachers urgently requires of the school principal that he should analyse the educational process on a short-term basis, that should derive from this analysis the fundamental trends of development and the dynamics of changes, the interactions and interlinkages of the studied phenomena.

According to M.L. Portnov and P.V. Khudominskiy the results of such an analysis should make it possible to formate the objectives of self-education activities, namely in the following problem areas:

- Marxist-Leninist theory,
- the economics of education
- general pedagogy, child, educational and social psychology,
- scientific, creative and methodical preparation for the subject which the teacher teaches,
- learning the basic content and method of teaching other subjects
- the administration of the educational process, the management scientific organization of educational work of the economics of education.

Within the process of self-education of teachers J. Fišer emphasises - besides the above mentioned and traditional pedagogical disciplines also the importance of comparative pedagogy, the theory of communist education, educational biology, educational sociology, the theory of the administration of education, family education, the education in child and youth organizations and the pedagogical aspects of enlightenment work.

Very important for the teacher who is involved in self-education is a well-conceived individual plan containing various aspects of the teacher´s activities, be it his attendance at various courses, his own independent study related to the preparation of his school and out-of-school educational activities, the dates set for teh evaluation of his achievements by the school´s administrators, inspectors, methodologists and experienced teachers, participation in collective methodical work in the school, participation in functions organized by various methodical councils and committees, at institutions of higher education, attendance at conferences and seminars, participation in educational readings, participation in the system of political schooling and in various educational excursions. The individual plan of self-education should also include attendance at selected film showings, theatre performances and concerts, viewing TV programmes and listening to radio programmes, all this on the assumption that such functions are in complinace with the objectives of self-education and contribute to raising the teacher´ s ideological, political, educational and cultural level. Involvement in public life is a significant component of these plans.

In conclusion I would like to say that it has not been the aim of this paper to make a systematic analysis of the problems of the self-education of teachers but only to indicate the basic principles which are observed in organizing the self-education of teachers in a socialist educational system. I was mainly concerned with pointing out that the further education of educators in the socialist educational system is only considered as being efficient when it is implemented not only through a system of courses but also by means of individual purposeful and systematic independent activity, i.e., by self-education, all this in compliance with the requirements placed by the development of education. In the conditions of the deepening impact of the scientific and technical revolution the growing volume of information accelerates the moral ageing of previously acquired knowledge. In order to keep up with this development and to eliminate routine, banality and mechanical work it is necessary to enhance the self-education components of the further education of teachers. This will make it possible to introduce scientific and namely scientific educational knowledge into educational practice and to put self-education in the position attributed to it by the founders of Marxism-Leninism and by leading educationalist.

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UNITED NATIONS EDUCATIONAL, SCIENTIFIC
AND CULTURAL ORGANIZATION

SPANISH NATIONAL COMMISSION
FOR UNESCO

RECOMMENDATIONS

of the international specialists who took part in the

TECHNICAL CONSULTATION ON THE FORMS OF AUTONOMOUS
AND SEMI-AUTONOMOUS LEARNING OF SECOND LANGUAGES

(UNESCO - Madrid, 21-22 September 1978)

During the meeting held 21-22 September 1978 in Madrid, the European experts invited by UNESCO

- accepted the final version of the report. They drew particular attention to its originality, especially with regard to the study of materials meant for autonomous learning which had never been carried out before ;
- formulated a certain number of "recommendations" concerning :
  - ways in which UNESCO could at present promote research in the field concerned and inform the public about the subject (cf. point 1
  - the forms of autonomous learning of second languages in autodidaxy (cf. point 2).

1. Recommendations concerning the possible forthcoming research projects and ways of informing the public.

1.1. It seems absolutely essential to hold an international meeting on the results of the research which was carried out at the instigation of UNESCO, (and especially on the final version of the report which was presented in Madrid). The participation of experts and authorities from countries other than European would widen the scope of the research, introducing a new range of problems. It would also enable contacts with other organizations working in the same field to be established.

1.2. The experts proposed that UNESCO should promote the following research projects :

- studies dealing specifically with autonomous or semi-autonomous learning of second languages ;
- more wide-ranging studies dealing with the learning of second languages in general but also having a direct bearing on the research into autonomous or semi-autonomous learning.

1.2.1. Studies directly linked to the theme

1.2.1.1. As far as the field of autodidaxy is concerned, it would seem absolutely essential to break into new ground and abandon the approach used up till now (the study of the materials), for that of the observation of the learner. Case studies are proposed, (the practical form of which has yet to be decided on), so as to determine :

- why the learner has chosen a given course, and not another one ;
- his idea of what a course for autodidacts should be at the different stages of the learning process ;
- how he works (where ? when ? how does he set about it ?)

This research should also deal with :

- the suitability of AAC cassettes (what does the learner actually do ? does he repeat or not ? does he record himself ? does he listen to his voice again ? does he feel the need to ? what does he hope to gain ?) ;
- the physiological and psychological factors governing memorization and loss through forgetfulness ;
- the ways of speeding up the learning process (pacing, frequency, favourable moments ; ideal length of a learning session).

The study could be complemented by a survey asking the editors : what feed-back do they get from their courses ? Why did they decide to make changes to their materials ?

1.2.1.2. As far as semi-autonomy is concerned, the group of experts remarked that the research field covered in the final version of the report does not correspond exactly to the studies undertaken at the instigation of the Council of Europe,(in particular the Council of Europe limited itself to dealing with institutions financed by public funds). It would seem desirable to pursue the examination of "systems" and among other things :

- examine staff-learner relations (teachers, helpers, native-speakers) chronologically during the learning process and the consequences which these have on the choice of teaching materials;
- ask the institutions about the results they have obtained (whether or not they have statistical data and data on the "attitude" of the learners) ; try to find out whether they have changed their strategies and if so, why ;
- assess to what extent - if at all - the different systems allow for individualized methodologies implemented by the learner.

It would seem necessary to carry out a study aimed at finding out the activities that the learner can/should do either on his own or in the presence of the teacher. Existing studies and current experiments should be made use of to this effect.

1.2.1.3. More extensive research (= not limited to "case studies") should be carried out with a view to establishing :

- certain statistical data on autodidacts (just how numerous are they ? what proportion of them use courses, radio programmes, the press etc.) ;
- the motivations which cause the learner to learn in an autonomous fashion ("external" motivations ; time, place, language being studied.. ; "internal" motivations : choice guided by psychological reasons or attitudes towards group work and/or attitude towards the learning process. Some research into this field has already been carried out at the Pushkin Institute in Moscow.

1.2.1.4. The group of experts also stressed the need :

- to compile a comparative word list of the terms used in the literature dealing with autonomy and individualization when learning second languages. Specialists would have as much need of such a word-list as the general public (perhaps two word-lists of different levels should be compiled). This word-list would be added to the final version of the report and its interest seems even greater because of the fact that the various definitions refer to views on learning which are often quite distinct one from the other, if not completely opposed ;
- to compile an exhaustive and up-to-date bibliography.

1.2.2. Studic indirectly linked to the theme

Two studies on relatively limited subjects (1.2.2.1. and 1.2.2.2.) and two studies on much more extensive subjects (1.2.2.3. and 1.2.2.4. were put forward :

1.2.2.1. A classification of the different types of exercises available for learning a second language would be a valuable instrument for deciding which type of exercises are suitable, and which are not, to autonomous learning. (A similar study has already been carried out by the Pushkin Institute in Moscow. It would be desirable to become acquainted with this, and if possible, complete it).

1.2.2.2. The final version of the report could be accompanied by a study of the appropriateness of the different aids (paper, cassettes,..) according to the aims of the course (written translation, oral comprehension..).

1.2.2.3. A study could be undertaken defining the main types of communication ("business", tourism, socializing,..).

1.2.2.4. It would be most useful to do research into the types of learners according to factors such as :

- the specific needs (tourism, migrants, secretaries) - perhaps drawing on some of the projects carried out by the Council of Europe ;
- learners with or without secondary education ; senior citizens..;
- desire for short term/long term results ;
- learning in a country where the second language is spoken/ in another country etc..

1.3. There does exist a very real second language "market" : in view of the necessity to "protect the customers' interests", it would seem necessary to inform potential learners (the general public). Unesco should encourage the publication of articles whose aim would be :

- to popularize the conclusions of the studies carried out on autodidaxy and semi-autonomy (in particular the conclusions of the final report) ;
- to provide a satisfactory source of information on the development, progress and research taking place in the field of autonomous or semi-autonomous learning of second languages.

Furthermore it is highly desirable that the conclusions of the final version of the report (and the subsequent studies) be widely distributed to all editors and teachers.

2. Recommendations concerning the forms of autodidactic learning.

2.0. Preliminary remarks :

- In considering second-language learning as it is today and in the future, three distinct categories must be distinguished : learners following courses in an institution, learners who are really able to be in charge of their learning process (for whom the term of "autonomous" learner is reserved, e.g. the CRAPEL in Nancy), and those who are not, but who nonetheless find themselves in the position of working alone (partially or completely). The following recommendations have been designed for this last category of learners.

  In any case for the majority of learners working in a framework of whatever kind seems preferable to working on their own.

- These remarks are of a general nature and apply to very commonly used courses which teach the 4 skills, making no provision for specific aims, (except in the case of a specialized course) or the characteristics of the learner, (age, amount of time he can devote to learning, etc). One must also remember that they are based on studies which were carried out solely in Europe.

- These recommendations may appear to be based on mere common sense and seem banal to specialists, but an examination of the courses available on the market reveals that very few of them are in fact applied.

2.1. Recommendations for all types of learners

- need for materials specially suited to autonomous work with oral and written exercises for comprehension and expression which take into account the aims of the course and communicative competence ;

- practical instructions on what can be achieved with the course in an ideal learning situation ;

- contents defined not only in grammatical and lexical terms but also in terms of communicative competence ;

- learning materials of convenient size and which are easy to handle ;

- materials designed in such a way as not to destroy the initial motivation ;

- good printing and attractive presentation ;

- cassettes rather than tapes ; lively recordings of perfect technical quality ;

- visual documents which are not only attractive illustrations but also have defined functions and are well integrated into the learning process ;

- brief introduction to the particular problems inherent in the learning of a second language (perhaps less indispensable for specialized courses,

- precise instructions aimed at helping the learner to take charge of his learning process and to carry on with the work he has undertaken in a useful way (training as to how to use authentic documents, etc.) ;

- balanced course content : the course should not consist of a mere list of words or grammatical précis ;

- satisfactory balance between the recommended learning time and the learning load ;

- detailed guide of how to use the course (instructions, order in which activities are to be carried out, pacing etc..) ;

- some degree of variety in the presentation of the language content, to be modulated according to the difficulty of what is being taught and the target skill (necessary for comprehension, less for expression) ;

- reference material (integrated or not into the basic text book) can be more or less complete but should be resistant (well bound, etc..) and easy to use (glossary, grammar, phonetics) ;

- numerous and varied exercises complete with key especially simulation exercises and work on authentic documents ;

- periodic testing on contents of course (perhaps less imperative for specialized courses). Tasks set should be as close as possible to the contents of the course ;

- maximum degree of individualization (pacing, methodology, correction, centres of interest) with orientation tests at the beginning and possibly throughout the course.

2.2. Specific recommendations for Beginners and False-Beginners (B/FB)

- known reference language indispensable but main body of work should be in target language (amount of text in mother tongue or known language should be less than that in the foreign language) ;

- high degree of psychological help,(appearance of materials, even distribution of content, explanation of objectives, encouragements and warnings) ;

- comprehensive reference material (explicit grammar with references to context of statements, word list per unit and recapitulative list with references to occurences, precise phonetical explanations ;

- "open" type exercises as soon as possible;

- regular, numerous and specific revision activities.

2.3. Specific recommendations for Intermediary and Advanced Learners (I/A)

- some degree of psychological help ;

- great variety in the presentation of new linguistic elements ;

- relatively limited reference material (glossary, syntax) but instructions as to how to put a dictionary or grammar to good use ;

- varied exercises : "closed" type with corrections and "open" type with prompts ;

- revision incorporated into the course but no revision lessons as such.

2.4. Specific recommendations for learners requiring a specialized language (S)

It should be remembered that, generally, complete beginners do not study specialized language, except in the case of languages with a special scientific status (e.g. Russian for French and English speakers) or for specializations which go no further than written comprehension.

- certain degree of variety in the presentation of new language items ;

- link between specialized language and everyday language with particular emphasis on certain grammatical points which are statistically important for the speciality in question and a selected glossary of specific terms;

- instructions to the learner on how to build up his own specialized dictionary ;

- simulation exercises in the speciality and work based on authentic documents ;

- revision integrated into the course but no revision lessons as such.

2.5. Definition of ideal types of course.

Apart from all the special points listed above, other factors should also be taken into account when assessing the quality of a course for autodidactic learners. These factors enable one to visualize the "graph" representing a given course and compare it with an "ideal graph".

The relevant factors are : cost, aids, time, learning load, guidelines and suitability. Each factor has 3 to 5 degrees as follows :

- COST :

0 to 10 dollars : category 0
11 to 80 dollars : category 1
81 to 220 dollars : category 2
221 to 400 dollars : category 3
over 400 dollars : category 4

- AIDS

0 : no sound aids (book only)
1 : sound aid present but not indispensable
2 : sound aid indispensable
3 : use of language laboratory (and sometimes of films)

For the 5 other factors, 3 degrees are sufficient.

- TIME : (time spent by learner according to instruction given in the course)

1 : 0 to 50 hours (short)
2 : 51 to 150 hours (average)
3 : over 150 hours (long)

- LEARNING LOAD (lexical and grammatical "load")

1 : light
2 : average
3 : heavy

- GUIDELINES (instructions and psychological help)

1 : non existant or elementary
2 : fairly detailed
3 : very detailed

- SUITABILITY (suitability to autonomous work : relevant factors are variety, reference material - vocabulary, grammar, phonetics -, exercises, tests, revision)

1 : not suited or not very well suited
2 : fairly well suited
3 : very well suited

- INDIVIDUALISATION (differentiation of course according to learner's characteristics)

1 : non existant or elementary
2 : average
3 : high or very high

The typology table is as follows :

factors / degrees	COST	AIDS	TIME	LEARNING LOAD	GUIDELINES	SUITABILITY	INDIVIDUALISATION
4							
3							
2							
1							
0							

The abbreviations used are : C, A, T, LL, G, S, I.

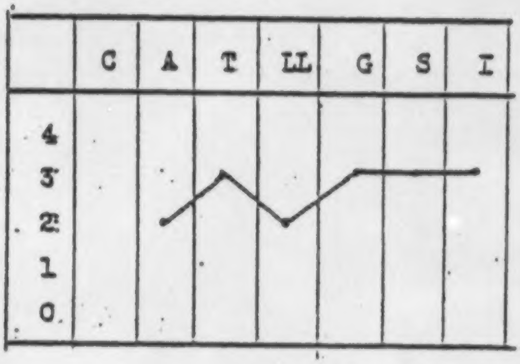
In all cases, the cost should , ideally, be as low as possible taking into account the composition of the course (aids, printed or visual elements, presentation etc.).

The following "formulae" are the best :

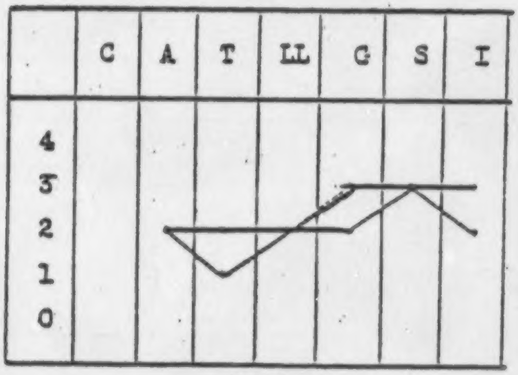
- B/FB level : A2, T2 or 3, LL2, G3, S3, I3
- I/A level : A2, T1 or 2, LL2, G2 or 3, S3, I2 or 3
- S level : A2, T1, LL1 or 2, G2 or 3, S3, I2 or 3

The corresponding graphs are the following :

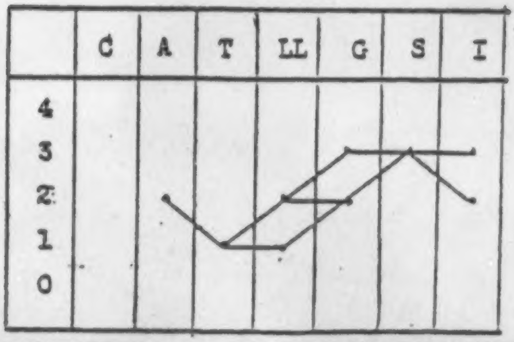
- B/FB level



- I/A level



- S Level



Annex B.2.

REUNION EUROPEENNE D'EXPERTS SUR LES MODALITES D'APPRENTISSAGE EN AUTODIDAXIE

EUROPEAN MEETING OF EXPERTS ON THE FORMS OF AUTODIDACTIC LEARNING

Paris, 16-19 octobre 1979

Bibliographie provisoire

Tentative bibliography

d'après les contributions des participants
based on participants' contributions

Paris, Octobre 1979

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EUROPEAN MEETING OF EXPERTS ON THE FORMS OF AUTODIDACTIC LEARNING

PARIS 16th - 19th october 1979

The UNESCO programme for 1979 - 1980 includes the meeting of European experts on the forms of autodidactic learning.

The French National Commission for UNESCO has been asked to organize this meeting,whose aim is to consider the general problems raised by autodidaxy in modern civilizations in connection with institutional structures, and especially educational systems as well as with other educational resources.

This meeting is a follow up of former research projects and its purpose is to widen the scope of the conclusions of these studies.

In 1975, UNESCO commissioned a team of research workers from the Centre Audio-visuel of the Ecole Normale Supérieure de Saint-Cloud (France), working in collaboration with a group of European experts, to carry out a research project on the form of autonomous learning (autodidaxy and semi-autonomy) in the field of the acquisition of certain second modern languages in Europe. This work took place from 1975 to 1978 on learning materials for English, French, Russian and Spanish (UNESCO working languages). The project, organized by the Secretariat of UNESCO with the help of the National Commissions for UNESCO of France, the Netherlands, the Soviet Union, Spain, Sweden and the United Kingdom, was concerned with adults and young grown up.

The conclusions of the project were examined at two international meetings (Paris 1977 - Madrid 1978) and resulted in a final report.

.../...

I. Objectives

Taking the previous studies as a starting point, the object of 1979 meeting is to consider a much wider field than foreign language learning and to examine the general problems raised by autodidaxy on a theoretical as well as practical level.

In fact, relatively little is known about this type of learning in spite of its interest as a solution to a great number and variety of needs, and in the field of further education.

The experts will deal with the problems raised by autodidactic learning (learning totally independent of any institutional framework or based on limited organized help) for adults (informal or post-secondary education).

The problems of the introduction of autonomous learning in educational systems will be treated from the viewpoint of preparation and training for autonomy.

It will probably be necessary to define in a clear and precise way the words and expressions related to autonomous learning, as great confusion seems to exist in this respect in the different languages.

The experts will therefore have to clarify these concepts. As a first proposition, the working group responsible for the organization of the meeting suggests the following working concepts :

a) Autonomy

- restrictive meaning : absence of teacher throughout the learning process ;
- broader meaning :
  - overall learning strategy centred on the learner who takes full responsability his own learning process,
  - border-line case of self-directed learning based on the learner's choice of a learning process with no constraints.

b) Autodidaxy : total autonomy.

c) Semi-autonomy : partial autonomy.

d) Individualization : learning process taking into account the characteristics of the learner.

.../...

II. Topics and organization of the meeting

To help to organize the debates, two directions were decided upon :

- Autodidaxy - why ?
- Autodidaxy - how ?

The following pages give the breakdown of these topics according to the agenda of the meeting, as well as the topics suggested for discussion in working groups. They are divided into two approaches, one mainly sociological, the other mainly pedagogical and psychological.

These two approaches will combine to enable the participants to make recommendations.

(see table)

III. Topics for working groups

1st Working group

2nd Working group

AUTODIDAXY - WHY ?

Sociological aspects

- The needs resulting from continuous scientific and technical developments, the evolution of cultural and social life, the necessity of constant further education = deficiency or lack of adaptation of educational systems ?
- Who are the autodidactic learners of today ? (Typology : age, socio cultural background...)

Psychological and pedagogical aspects

1 - The psychological, practical and emotional motivations of the autodidactic learner.

2 - The psychological difficulties involved when choosing work in autodidaxy.

3 - The individual and collective aims, the enrichment by the learning process or by its result.

- -

AUTODIDAXY - HOW ?

- The part played by environment and media.
- The problem of availability and use of resources : the organization and setting up by public and local authorities...
- Community groups, the experience of popular education associations
- Problems of assessing autodidaxy (delivery of diplomas, recognition of work done, all forms of certification, legal aspects and regulations).

1 - Training for autonomy (who ought to do it ? How ?)

2 - Learning strategies for knowledge and "knowhow". How are the resources to be used ?

3 - What methodological aid and what help for who ?

4 - Self-assessment.

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EUROPEAN MEETING OF EXPERTS ON THE FORMS OF AUTODIDACTIC LEARNING

Paris, 16-19 octobre 1979

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